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The Hunting Trip

A Reading A-Z Level R Benchmark Book

Word Count: 851



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BENCHMARK • R

The Hunting Trip



Written by Katherine Follett
Illustrated by John Kastner

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Level R Benchmark Book
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Correlation

LEVEL R

Fountas & Pinnell	O
Reading Recovery	22
DRA	34



José scurried up a makeshift ladder, which was nothing more than strips of scrap wood nailed to the trunk of the ancient oak. He pulled himself onto the flimsy sheet of plywood that served as the floor of the tree stand. He gently set his rifle down and took a seat in one of the two aluminum folding chairs while his father slowly followed him.

José noticed that his father was slightly out of breath when he reached the top, stopping to pull a Thermos of steaming coffee from his deep jacket pocket and **grimacing** as he swallowed. José felt his own chest constricting and realized he had been holding his breath for some time. He recalled his father's advice about nerves—"deep breaths work better than you think"—and drew a big lungful of air. His father heard him exhaling.

"You nervous?" he asked.

"No . . . well, a little," José admitted.

"Just remember that we're the only ones out here for miles. I'd be the only one to see you if you did anything **embarrassing**, and I've seen you do plenty of embarrassing things," his father chuckled.

"I know," José said. He took another deep breath, tasting the freshness of the woods around them, watching the vapor cloud materialize in front of his face. But he still clutched the barrel of his **rifle** so tightly that his fingers grew numb. He **regretted** being so



anxious, unable to truly enjoy the beauty of the forest around them. The open meadow below the tree stand was dim and frosty on this early November morning.

“Now that we’re set in our place, we’ll need to wait quietly for about half an hour before the animals forget we’re here. Until then, we probably won’t see a thing,” José’s father explained.

Remaining still for half an hour dragged on forever, and as his father had promised, they saw nothing. But just as the minute hand of José’s watch seemed about to give up and freeze altogether, he heard a rustle—a squirrel. Soon he heard other creatures; crows and ravens flapped overhead, cawing and croaking, leaving José wondering whether the birds’ breath also left little clouds in the air. Three or four rabbits browsed among the leaf litter underneath the tree stand. Suddenly José and his father heard the sharp footfalls of their approaching **quarry**—the white-tailed deer.

All the hunting advice José’s father had ever given him began to rush through José’s head: “Don’t ever shoot unless you’re absolutely sure you see antlers—we don’t want to kill a doe, and we certainly don’t want to kill another hunter.” “If you can’t see more than half the deer’s body at one time, you’re too far away and there are too many trees and bushes between you and it.” “Aim just ahead of where you want to hit, because deer move when you least expect them.”

As if fulfilling a checklist in José's brain, a buck stepped smoothly into view. It definitely had antlers, it was in plain view, and José aimed his rifle just ahead of its chest. The buck was big and sleek, with soft brown eyes and a white rump under its flicking tail. José marked it in his **crosshairs**, feeling the trigger underneath his finger.

"José," his father said, not even whispering as he pointed his chin toward the buck, "go ahead."

"No," José said out loud, lowering his rifle. The deer surely heard him, for it swiveled its ears around until all of its senses focused on the tree stand, **alert** and confused, before it jogged away.

"Are you angry with me?" José asked his father.

"No, José, I'm not. In fact, I did the very same thing the first time I went out hunting with my father."

José felt **relieved**. "Really?" he said.



"I have a lot of time to think when I'm out here alone in the tree stand, and I've decided something about hunting. When we buy meat at the supermarket, we never see the animal it

comes from. But when we hunt, we see the animal, and we shoot the animal, and we take it home and eat its meat. It's more than just eating—it's an **interaction** between one person and one animal. And sometimes the animal looks at you, and you know you shouldn't shoot it. Sometimes I feel proud to get a buck, like I've won a race or I'm a cougar that caught its prey. But sometimes I feel like you just felt, and I'm glad you have that sense, too. If you shoot even when your heart tells you not to, that means you're killing without caring, without paying attention to the interaction between you and the animal. Some people never shoot, and some people don't think hunting is right at all, and that's okay too."

José inhaled deeply and relaxed for the first time all morning. His father took out the Thermos again, popped the cup off the top, filled it, and handed it to José.

"You want me to drink coffee?" José asked.

"It's hot cocoa," his father answered. "I brought it for you."

Glossary

alert (<i>adj.</i>)	watchful and attentive to one's surroundings (p. 7)
crosshairs (<i>n.</i>)	the two fine lines that cross in the eyepiece of an optical instrument (p. 7)
embarrassing (<i>adj.</i>)	feeling awkward, uneasy, or self-conscious (p. 4)
grimacing (<i>v.</i>)	to twist the face to show pain or disgust (p. 4)
interaction (<i>n.</i>)	an exchange of ideas or information between different people or groups (p. 9)
quarry (<i>n.</i>)	an animal that is hunted or chased (p. 6)
regretted (<i>v.</i>)	to have felt sad or sorry about previous words or actions (p. 4)
relieved (<i>adj.</i>)	freed from stress or worry (p. 7)
rifle (<i>n.</i>)	a gun with a long barrel that has spiral grooves inside to make the bullet spin (p. 4)

Reading a-z Running Record

Level R

Student's Name _____ Date _____

The Hunting Trip
154 words

Have the student read out loud as you record.

Assessed by _____

page	E = errors S-C = self-correction M = meaning S = structure V = visual	E	S-C	E			S-C		
				M	S	V	M	S	V
3	José scurried up a makeshift ladder, which was nothing more than strips of scrap wood nailed to the trunk of the ancient oak. He pulled himself onto the flimsy sheet of plywood that served as the floor of the tree stand. He gently set his rifle down and took a seat in one of the two aluminum folding chairs while his father slowly followed him.								
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Totals									

Accuracy Rate:

Error Rate:

Self-correction Rate:

Nature Reuses and Recycles

A Reading A-Z Level R Benchmark Book

Word Count: 690




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Nature Reuses and Recycles

Written by Molly Wetterschneider

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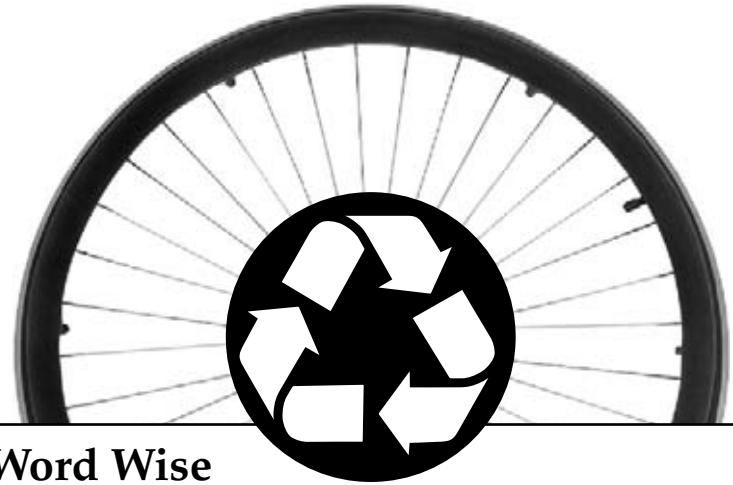
Correlation

LEVEL R	
Fountas & Pinnell	O
Reading Recovery	22
DRA	34



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Word Wise

The word *recycle* has two word parts: *re-* and *-cycle*. The word part *re-* means "again." The word part *-cycle* means to circle around. Just as a bicycle wheel circles around and around, recycled materials can move from your home to a recycling plant and back to your home again.

Recycle, Reuse, or Trash?

Clink! Bonk! Plunk!

Those are the sounds of cans and bottles being tossed into the recycling bin. When you throw away waste, you put it in the trashcan. But, some waste is not trash at all. Bottles, cans, and newspapers can be **recycled**. Recycling something means that the **materials** that make up the thing can be remade into a new thing.

Recycling is different from **reusing**. When you reuse something, you use it again. You keep it in the same form and do not have to break it down into its materials first. When you reuse a bottle, you might fill it up with water again. You do not have to reuse something for its original purpose. When you reuse a soup can, you might keep pencils in it. When you reuse newspaper, you might use it to wrap birthday presents.



After you are through reusing something, you can then recycle it or reuse it again!



Nature Reuses and Recycles

People are not the only ones who reuse and recycle. Nature does this too with organic materials. **Organic** materials are the things of which living things are made. The reusing and recycling of organic materials in nature is how living things adapt and survive in their **environments**.



Nature recycles

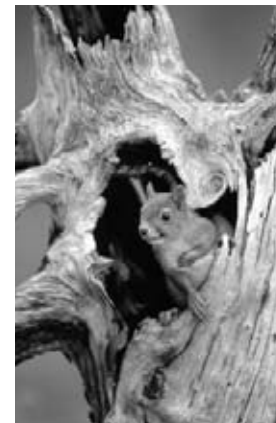


People recycle



What parts of this tree might be used by other living things?

Remember that things in nature reuse organic materials. A tree is not just a tree. Every part of a tree can be used and reused in some way by other living things. The original purpose of a tree's leaves is to make food for the tree to survive. But plants, insects, birds, and other animals have adapted to use parts from the tree to help them survive, too.



A tree's leaves offer shade for sprouting plants. Birds line their nests with twigs and leaves. Sometimes squirrels will reuse a bird's nest for their own. Some insects make homes from dead leaves. So you see, the tree leaves are used to provide food for the tree, shade for a plant, a home for a bird, a home for a squirrel, and a home for an insect. That's five uses for the same leaves!

Trees are used in other ways, too. Owls make homes in hollows of tree trunks. Beavers cut down trees and branches to make their homes and dams. Some animals also eat bark, leaves, and fruit from trees.

Trees also provide valuable help to other living things when they die. Fallen trees become “nurse logs” that provide food and a protected place to grow for new trees and other plants. Dead trees can also provide food and building materials for other **organisms**.

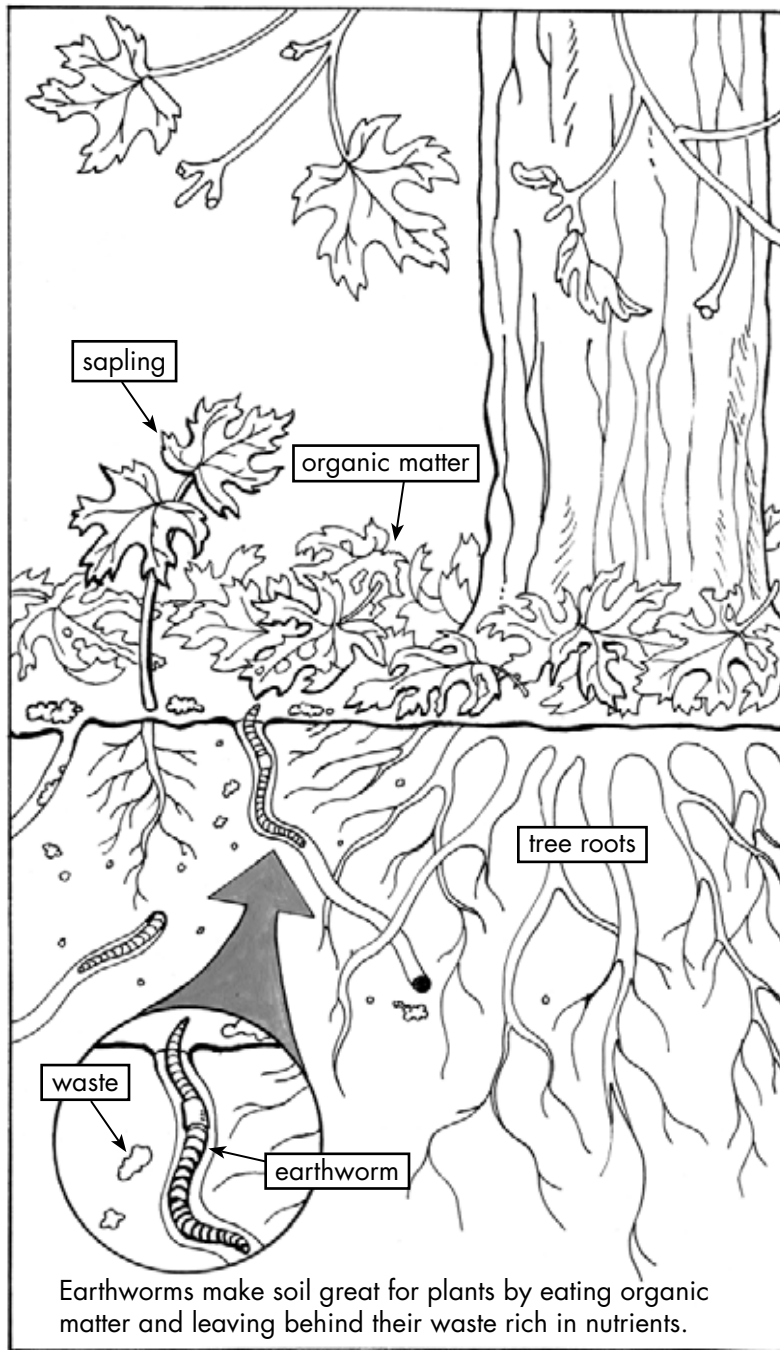


Some Living Things Eat Dead Things

Mushrooms and organisms too small to see, which are called **bacteria**, feed on dead things such as fallen trees. These organisms break down a dead thing's organic materials. This process makes **chemicals** that can be used by other living things.



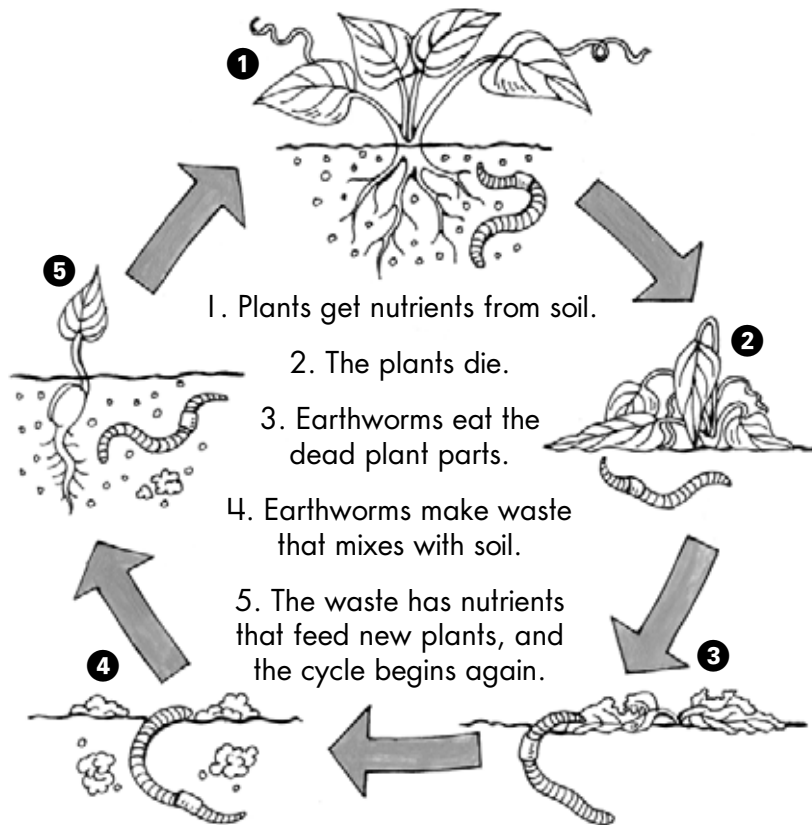
Some animals eat dead things, too. For example, an earthworm will eat dead leaves that fall to the ground. It will also eat plants that have died and begun to rot.



When earthworms eat dead plants, their bodies make waste. These bits of waste look like little blobs of soil, and in fact, these blobs are rich food for plants. They contain many **nutrients** that plants need to develop and grow. Nutrients are what food contains that give living things energy or help them to grow. Plants take up nutrients from the soil through their roots.

Nutrients Cycle Through Nature

Materials in nature can be said to go through a recycling process, much like our recycling of bottles and paper. A plant gets nutrients from soil in order to grow. When the plant dies, earthworms eat it. The earthworms' waste then makes nutrients for living plants. The natural materials move in a circle from plants to worms and back to plants again.



Thank you for recycling!

Let's Learn from Nature

When you think of all the ways that living things use other living and dead things, you can see that nature does an awful lot of reusing and even some recycling. People try to reuse and recycle as much as they can so that they create less trash. But, nature reuses or recycles every part of every living thing. We can learn a lot from nature.

Glossary

bacteria (<i>n.</i>)	very tiny organisms that feed on dead plants and animals (p. 10)
chemicals (<i>n.</i>)	basic building blocks that form matter and are needed by organisms to live (p. 10)
environments (<i>n.</i>)	the earth, sea, and sky upon which organisms depend for living (p. 6)
materials (<i>n.</i>)	all that is used to make something (p. 4)
nutrients (<i>n.</i>)	chemicals in food that give organisms energy or help them to grow (p. 12)
organic (<i>adj.</i>)	related to living things (p. 6)
organisms (<i>n.</i>)	living things (p. 9)
recycled (<i>v.</i>)	to break down something into materials that can be remade into new things (p. 4)
reusing (<i>v.</i>)	using something again (p. 5)

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Reading a-z Running Record

Level R

Student's Name _____ Date _____

**Nature Reuses
and Recycles
145 words**

Have the student read out loud as you record. Assessed by _____

page	E = errors S-C = self-correction M = meaning S = structure V = visual	E	S-C	E			S-C		
				M	S	V	M	S	V
4	Recycle, Reuse, or Trash? Clink! Bonk! Plunk! Those are the sounds of cans and bottles being tossed into the recycling bin. When you throw away waste, you put it in the trashcan. But, some waste is not trash at all. Bottles, cans, and newspapers can be recycled. Recycling something means that the materials that make up the thing can be remade into a new thing.								
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Totals									

Accuracy Rate:

Error Rate:

Self-correction Rate:

Sea Turtles

A Reading A-Z Level R Leveled Reader

Word Count: 1,564



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Sea Turtles



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Sea Turtles



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Cover photo: Hawksbill sea turtle

This book is dedicated to Nehemiah Stark,
who shares my love of sea turtles.

Sea Turtles
Level R Leveled Reader
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Illustrations by Cende Hill

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Correlation

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Fountas & Pinnell	O
Reading Recovery	22
DRA	34

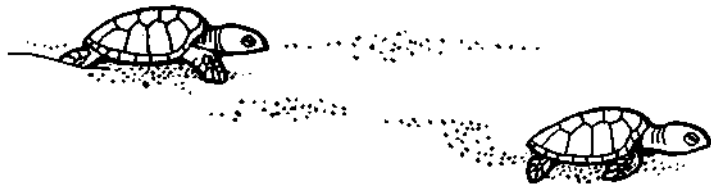


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Hawksbill

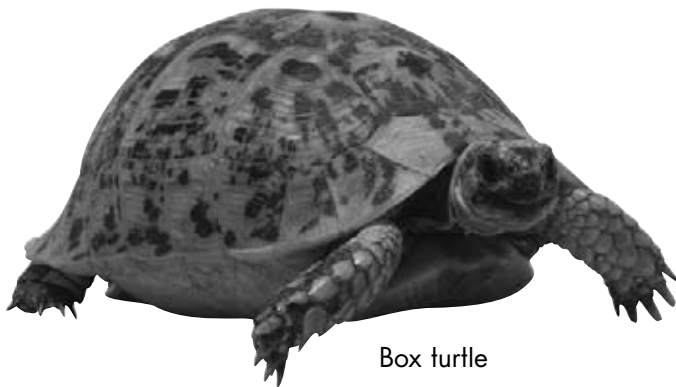
Introduction

Sea turtles have roamed the oceans for at least 150 million years. They are among the earth's oldest surviving animals, having lived during the time of the dinosaurs. Like dinosaurs, sea turtles are reptiles, and like all reptiles, sea turtles are cold-blooded. They have scaly skin, breathe air, and have a heart with three chambers.

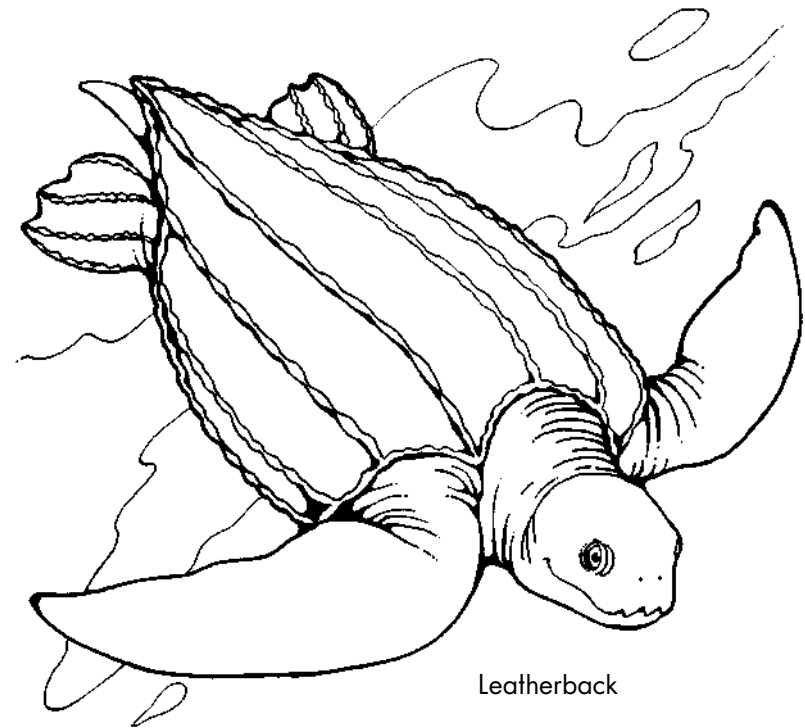


Desert tortoise

Sea turtles have many living turtle relatives, including freshwater turtles, snapping turtles, tortoises, and soft-shelled turtles. All of these turtles live either on land or in freshwater. Sea turtles are the only turtles that live in the saltwater of the world's oceans.



Box turtle

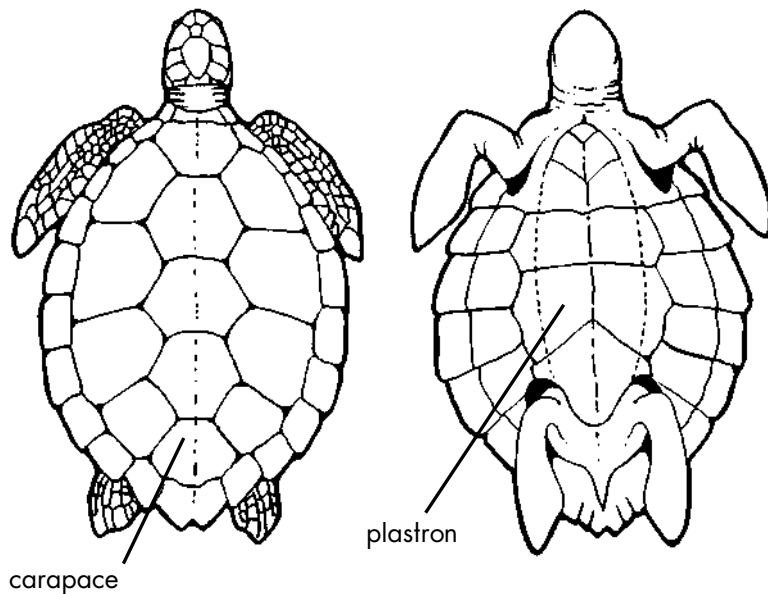


Leatherback

Types of Sea Turtles

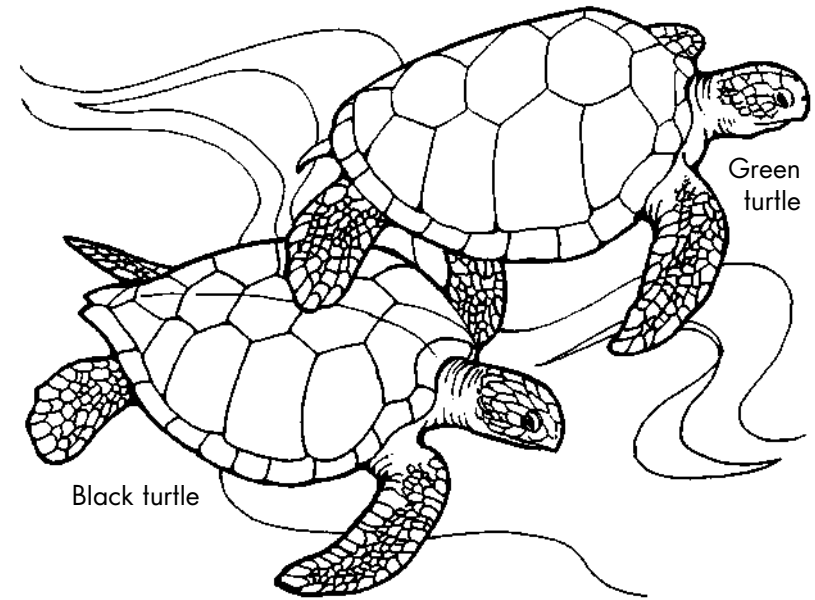
Sea turtles are divided into two types. One type, called the leatherback, is covered with leathery skin. Beneath this skin is a shell made of cartilage and thousands of tiny bones. The cartilage forms prominent ridges that give the leatherback its unique appearance. The leatherback is the largest of all sea turtles and the most widely distributed. It lives far out to sea except during breeding season.

All types of sea turtles other than the leatherback have a shell made of bony plates, or **scutes**. The top part of the shell is called the **carapace**. The part of the shell under the turtle's belly is called the **plastron**. These two parts are connected to the muscles and bones inside the turtle's body. The number and pattern of the scutes is helpful in identifying the type of sea turtle.



Do You Know?

Unlike a land turtle, a sea turtle cannot pull its limbs or head into its shell.

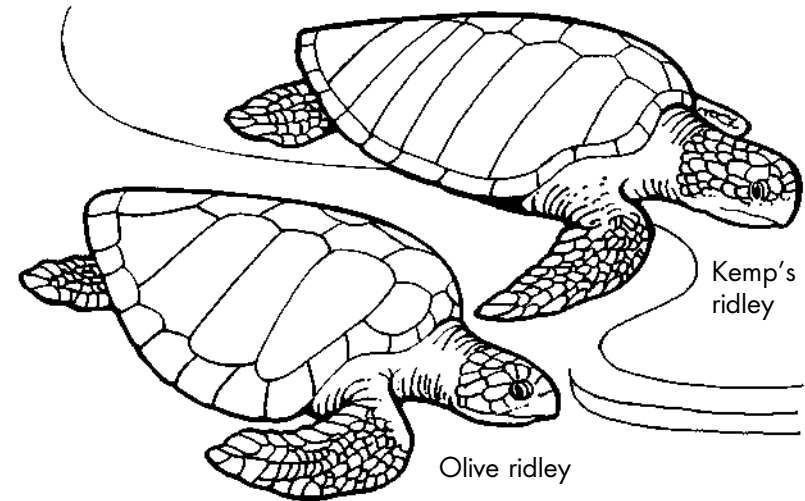
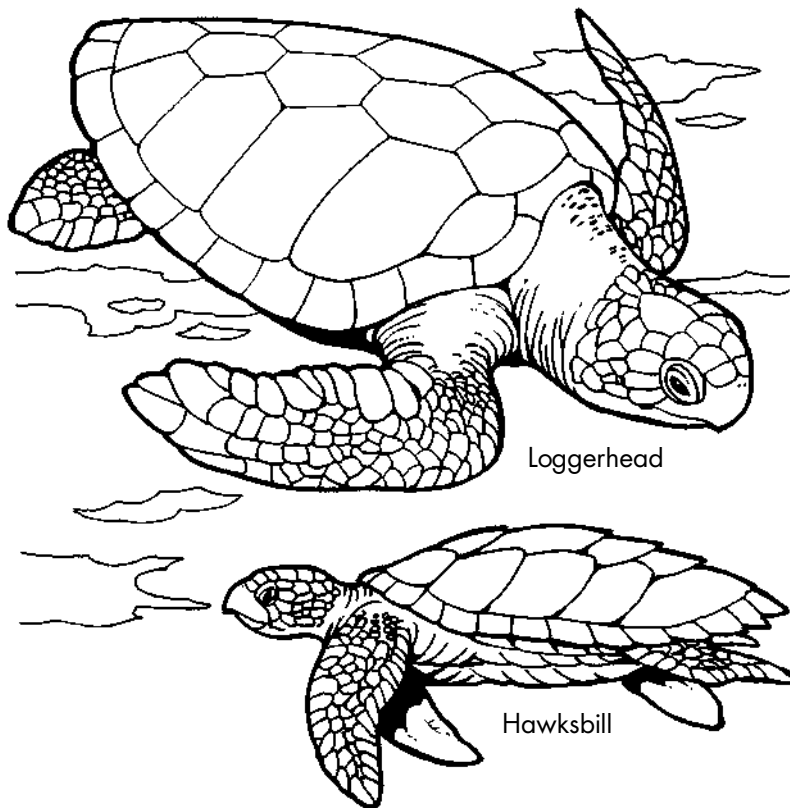


The green turtle is a medium to large sea turtle with a shell that has mottled markings. The green turtle's head is small relative to its body when compared with other sea turtles. It lives in many oceans around the world.

The black turtle is sometimes called the Eastern Pacific green turtle. Researchers do not know whether it is a type of green turtle. The black turtle is dark gray with stripes of other dark colors. It lives on the west coasts of North and South America. The black turtle prefers to live in warm bays and protected shores, and is rarely found in the open ocean.

The loggerhead turtle is a large reddish-brown sea turtle. It has an extremely large head for the size of its body. Loggerheads live along the coast in tropical and subtropical waters around the world.

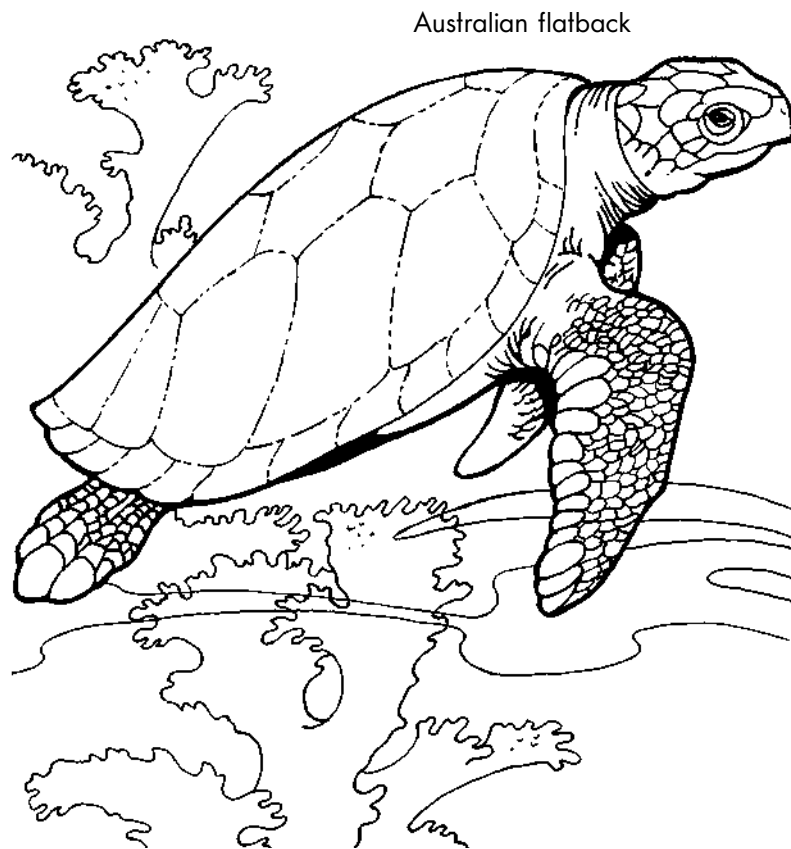
The hawksbill is a small to medium sea turtle with a hawklike beak. Its shell has a distinctive pattern of thick, overlapping brown scales. It lives in and around shallow coastal waters in and around coral reefs.



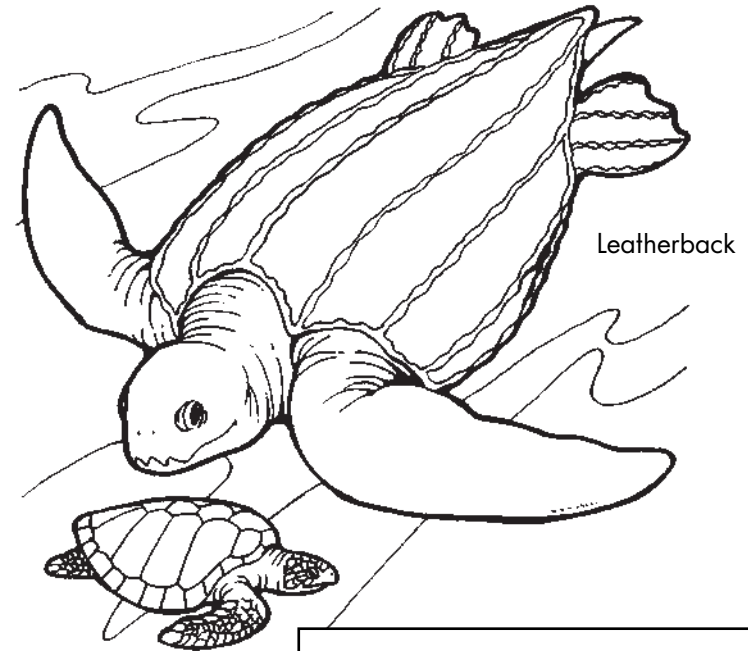
Kemp's ridley, one of the smallest sea turtles, has an oval shell that is black during juvenile years, changing to olive gray during adulthood. The Kemp's ridley has one of the most restricted ranges of all sea turtles. Adults are rarely found outside of the Gulf of Mexico, and almost all Kemp's ridleys nest on a five-mile stretch of beach in Mexico.

The olive ridley, another small sea turtle, is similar to the Kemp's ridley. However, its shell is thinner and its head is smaller. The shell is heart-shaped or round, and may be gray-brown, black, or olive green. The olive ridley lives in coastal tropical regions of the world's oceans.

The Australian flatback lives in shallow waters off the coast of northern Australia and Papua New Guinea. It stays close to the shore, never venturing into the open ocean. It prefers to live around coral reefs and grassy inlets. The Australian flatback has a flat body with a smooth shell that is olive gray with lighter edges.



Australian flatback



Leatherback

Olive ridley

Do You Know?

The largest leatherback ever recorded weighed over one ton.

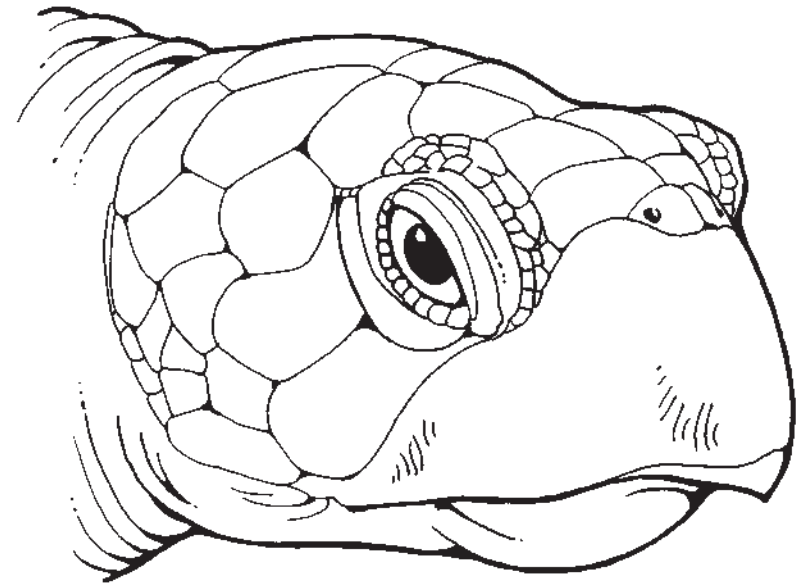
Physical Appearance

Sea turtles vary greatly in size. The largest is the leatherback, which can grow as large as 1.9 m (6 ft.) and weigh up to 500 kg (1,100 lbs.). The smallest sea turtles are the olive ridley and Kemp's ridley. They may measure up to 65 cm (30 in.) and weigh up to 50 kg (110 lb.). Adult male and female sea turtles of each species are equal in size.

Sea turtles are strong, graceful swimmers and divers whose streamlined bodies are well adapted to life in the ocean. Long front flippers provide the power for propelling through the water. The hind flippers are used as rudders for steering. When sea turtles are active, they need to return to the water's surface every few minutes in order to breathe. When resting or sleeping, they can remain under water without breathing for two hours or more.



Hawksbill

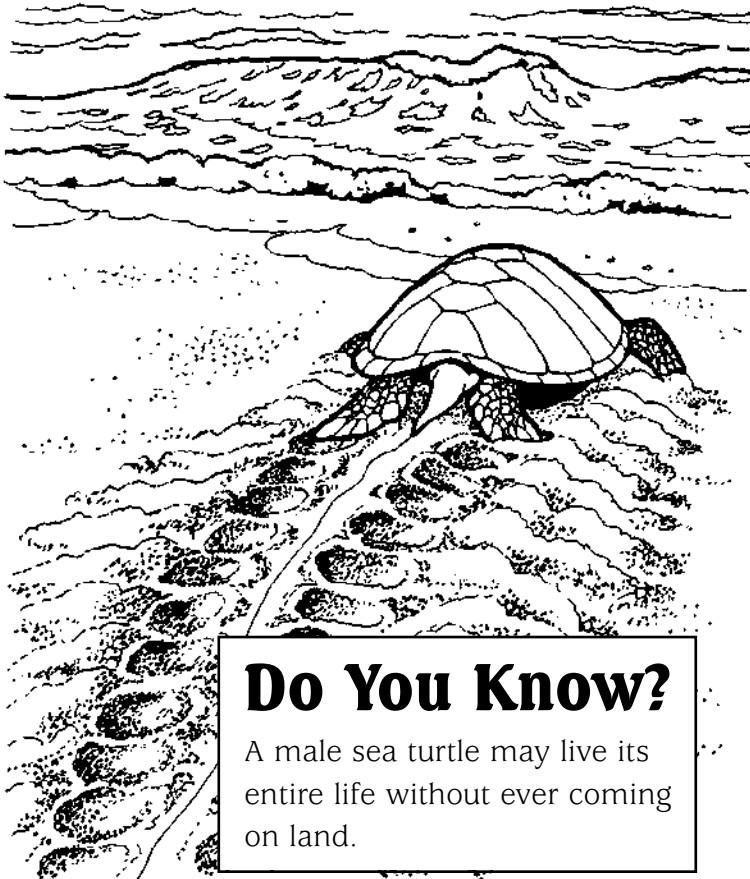


Sea turtles have beaklike jaws.

Like all turtles, sea turtles have jaws that are beaklike in shape and lack teeth. The unique jaw shape of each species is an adaptation to its unique diet. Some sea turtles are **carnivorous** (meat eating), some are **herbivorous** (plant eating), and some are **omnivorous** (eating both meat and plants). Green sea turtles are herbivorous as adults. Leatherbacks feed mainly on soft-bodied animals such as jellyfish. Loggerheads eat crabs, jellyfish, and mollusks.

Nesting

Sea turtles live almost their entire lives in water. Females come onto sandy beaches mainly to lay their eggs. Sea turtles are awkward and slow-moving on land, as well as being nearsighted. Because of this, they are more vulnerable to attack by predators while on land.



Do You Know?

A male sea turtle may live its entire life without ever coming on land.



Leatherback

Most females return to the same nesting beach every year. They come ashore at night, alone, usually during high tide. A female chooses a spot above the high tide line so her eggs will not get washed away. With her front flippers, she digs a pit for her body, then digs an egg cavity with her hind flippers.

The female sea turtle lays her eggs in the egg cavity. Depending on the species, she may lay between 50 and 200 eggs. The eggs, which look like Ping-Pong balls, have soft shells and do not break as they fall from her body. When the female has laid her eggs, she uses her hind flippers to cover them with sand. The sand keeps the eggs hidden from predators and keeps them warm so they will incubate.



An egg from a sea turtle nest

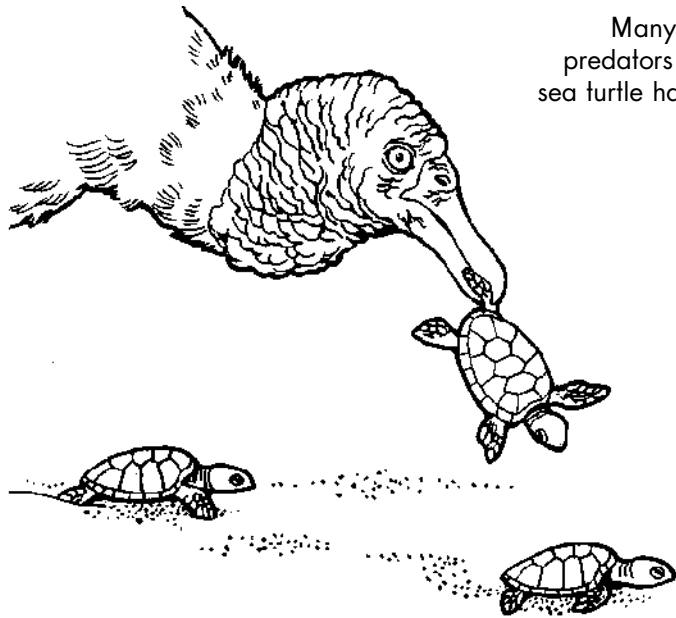
When a female sea turtle comes on land to lay her eggs, she often looks as though she is crying. This is because of a gland that helps rid her body of excess salt. While on land, the “tears” help to keep sand out of her eyes while she is digging her nest.

Do You Know?

Sometimes a female crawls onto land but for unknown reasons decides not to nest. This is called a “**false crawl**.”



A female loggerhead returns to the ocean after laying her eggs. Her eyes are free of sand because of the “tears” she has cried.



Many kinds of predators feast on sea turtle hatchlings.

Sea turtle eggs hatch between 45 and 70 days after being laid. Hatchlings usually wait until night to emerge from the nest. They are very vulnerable to predators when they first hatch. Nighttime is a safer time for them to make their way to the water. Still, many hatchlings do not survive the trip to the ocean.

Do You Know?

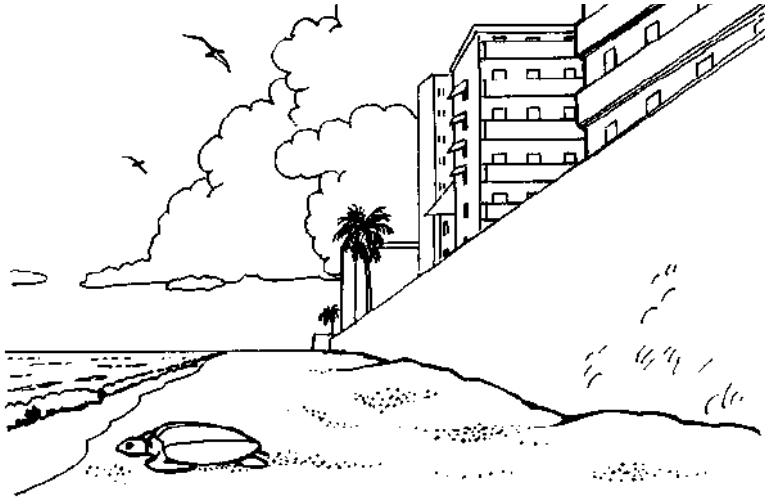
Sea turtle eggs do not start out male or female. The temperature of the surrounding sand helps to determine the sex of the hatchling. Hot sand produces more females, and cool sand produces more males.

Hazards

Adult sea turtles have few natural enemies. Sharks are the main predators, especially tiger sharks. Sea turtle eggs and hatchlings are eaten by fish, dogs, seabirds, raccoons, ghost crabs, and other predators. More than 90 percent of hatchlings are eaten by predators. Only about 1 in 1,000 sea turtles survives to maturity.



Hawksbill



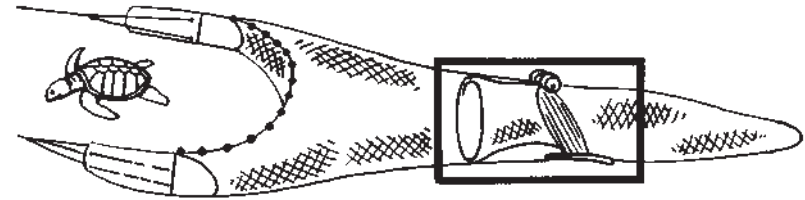
A female sea turtle is discouraged from nesting because of buildings and oceanside development.

The most serious dangers to all kinds of sea turtles come from human impact. Nesting areas are scarce because of building construction along beaches. Lights, noise, trash, and activity on beaches can discourage adult females from coming on shore. All of these things also confuse hatchlings, who may accidentally head away from the ocean instead of toward it.

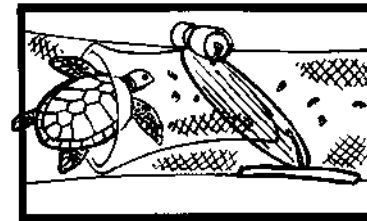
Some sea turtles die from eating trash. Leatherbacks often mistake plastic for jellyfish and die when it clogs up their digestive system. Sea turtles can also die from injuries caused by collisions with boats.

Protecting Sea Turtles

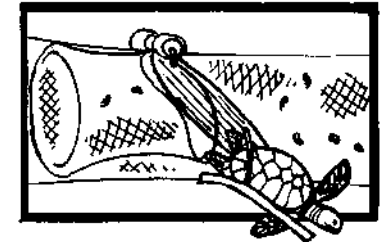
Thousands of sea turtles drown each year in shrimp nets. United States law requires shrimp fishermen to use a Turtle Excluder Device (TED) on all shrimp nets, which is a trap door inside the shrimp net that allows sea turtles to escape. TEDs have saved the lives of many turtles. However, some shrimp fishermen do not follow the law. Shrimp nets without TEDs continue to be a danger to sea turtles.



Shrimp trawling net with Turtle Excluder Device (TED) shown in box

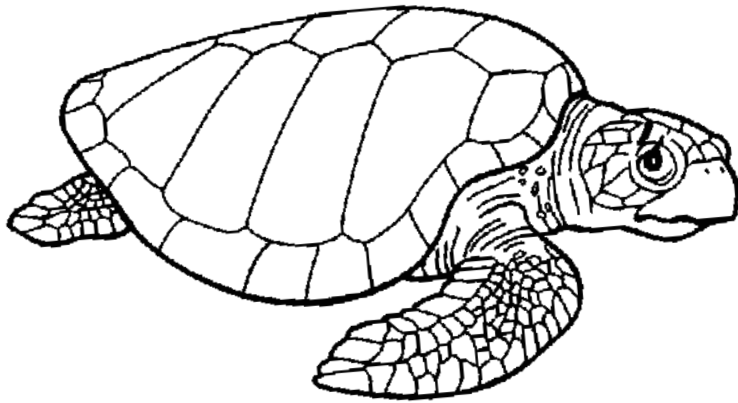


(left) The turtle and shrimp enter the TED.

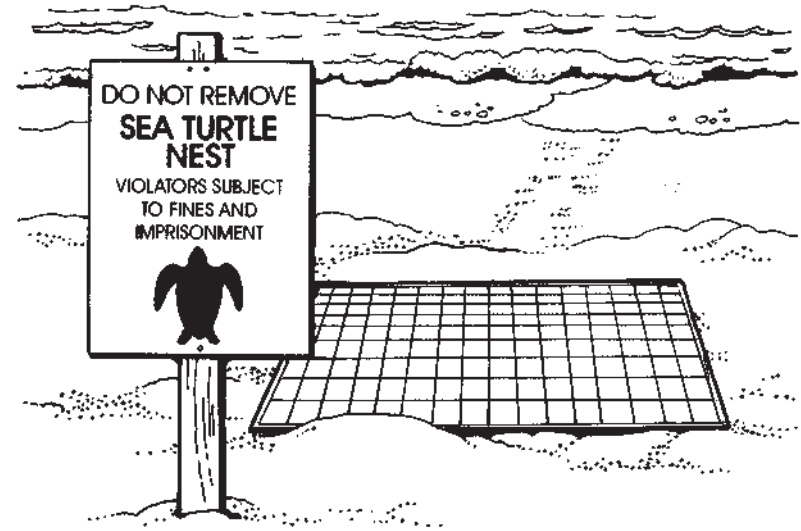


(right) The shrimp are small enough to shoot through the bars and into the net. But the turtle slides down the bars and hits a flap, which then opens to release the turtle.

Sea turtles are also hunted for their shells, which are used to make combs, eyeglass frames, and souvenirs. Another danger to sea turtles is the illegal collection of their eggs for food. Green turtles and other sea turtles are also hunted illegally for their meat.



All eight species of sea turtles are threatened or endangered in the United States. It is illegal to harm or interfere with a sea turtle or its eggs. An international treaty protects all species of sea turtles, and over 100 countries have banned the import or export of sea turtle products. Still, many people break laws or are careless. Sea turtle protection must be improved considerably if they are to survive into the future.

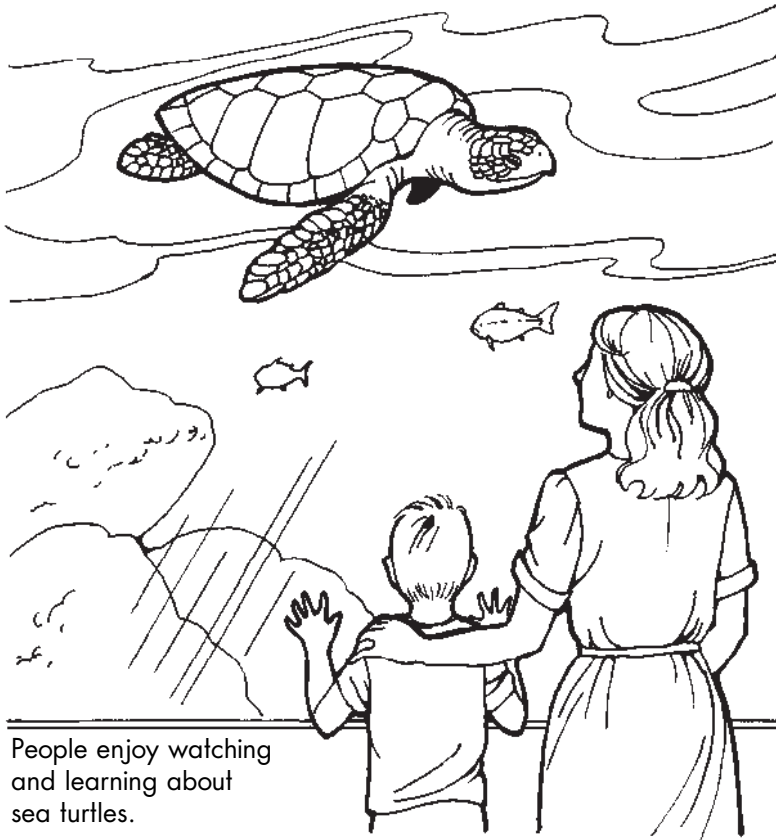


Signs like this one warn people to avoid sea turtle nests.

Many people in many countries are working to keep sea turtle numbers from dwindling. Volunteers in many nesting areas put screens over the nests to keep out predators, and post warning signs to alert beachcombers to the presence of nests. Eggs laid too close to the water are often moved to higher ground.

People are also working to protect important nesting sites by making them wildlife refuges. Also, many clinics help to rescue and give medical attention to injured sea turtles.

Some zoos and aquariums have captive sea turtles. Sea turtles are much happier in the wild. But it is also good for people to learn about sea turtles and watch them up close. People can also learn about the many hazards to sea turtle survival caused by humans. Hopefully, enough people will care about sea turtles to preserve their habitats and help them to survive.



People enjoy watching and learning about sea turtles.

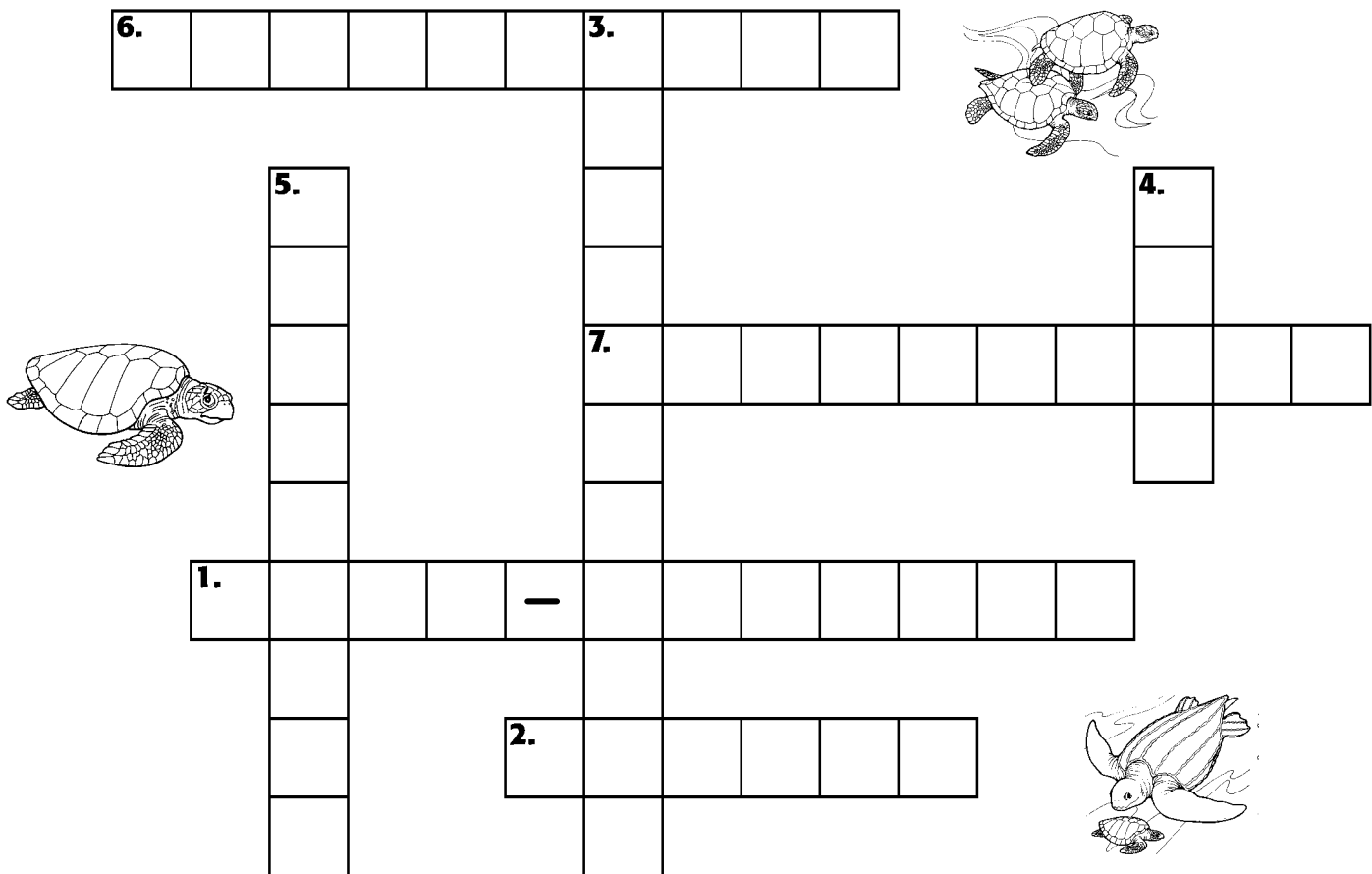
Glossary

carapace	the top of a turtle's shell (p. 7)
carnivore	an animal that eats only meat (p. 14)
false crawl	when a female sea turtle comes onto land but returns to the ocean without nesting (p. 18)
herbivore	an animal that eats only plants (p. 14)
omnivore	an animal that eats both plants and meat (p. 14)
plastron	the part of a turtle's shell underneath its belly (p. 7)
scutes	the bony plates that make up a turtle's shell (p. 7)

Name _____

INSTRUCTIONS: Solve the Sea Turtles crossword puzzle using the words at the bottom of the page.

1. Mammals are warm-blooded. Sea turtles are _____.
2. Most sea turtles have a shell made of bony plates. These plates are called _____.
3. The _____ turtle has a skin that covers its shell.
4. Whether a baby sea turtle will become male or female depends upon the temperature of the _____.
5. Some turtles, called _____ eat both meat and plants.
6. The _____ flatback lives in shallow waters off the coast of Northern Australia and Papua New Guinea.
7. Many sea turtle eggs and _____ are eaten by predators.



sand

omnivores

hatchlings

scutes

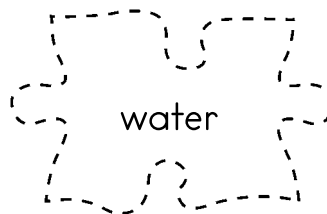
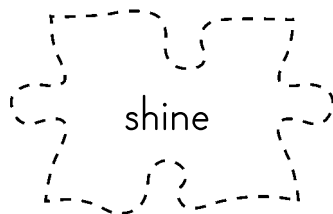
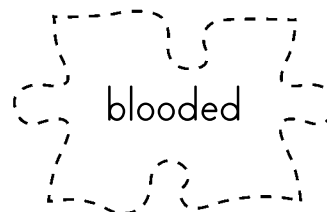
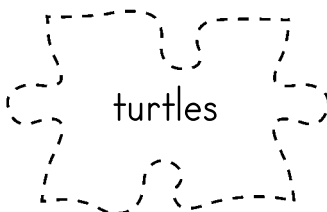
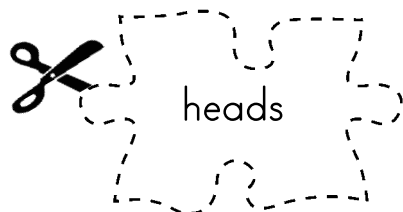
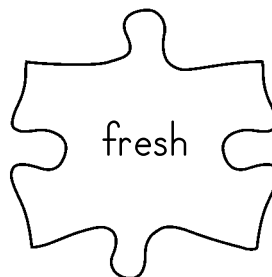
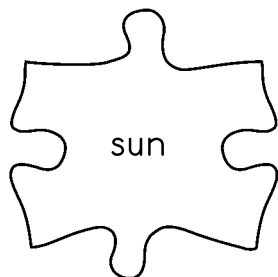
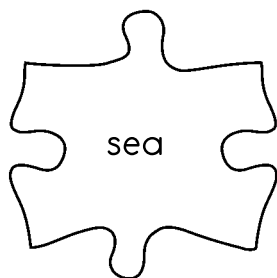
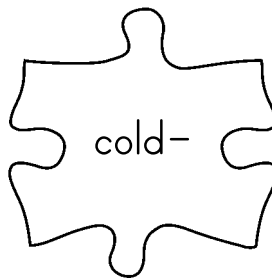
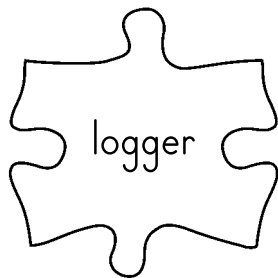
leatherback

cold-blooded

Australian

Name _____

INSTRUCTIONS: Look at the words in the puzzle pieces at the top and bottom of the page. Cut out the puzzle pieces from the bottom of the page and match them to the words at the top of the page. Now write sentences for three of the compound words.



1. _____
2. _____
3. _____

Speed

A Reading A-Z Level R Leveled Reader

Word Count: 1,511



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Speed



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Speed

Level R Leveled Reader

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The fastest living thing, a peregrine falcon

Introduction

What is speed? Speed is the time it takes to go a certain distance. For most things, speed is measured in kilometers or miles per hour. For example, a speed of 16 kilometers (10 mi.) per hour means that something is moving fast enough to travel 16 kilometers in one hour. This speed is recorded as 16 kph. Speed can also be measured in other units of time and distance. It can be measured in meters per second or meters per minute. It can be measured in centimeters or inches per second, minute, or hour.

Faster objects are usually measured in larger units of distance and shorter units of time. Slower things, on the other hand, are usually measured in smaller units of distance and larger units of time. For example, a snail's speed might be measured in centimeters per hour. The movement of a glacier might be measured in meters per month. Light—the fastest thing in the universe—moves at 299,338 kilometers per second (186,000 mps.).



The marlin (pictured here) and sailfish are among the fastest fish in the world.

People have always seemed to be fascinated by speed. We seem to love things that move fast. It doesn't matter if it is a cheetah chasing a gazelle, a horse galloping around a track, or human runners dashing toward a finish line. We simply think that fast things are cool. Perhaps that is why some of the most popular Olympic events, from the first games on, have been contests involving speed.



Footrace in early Greek Olympic games



Female sprinters competing in the 100-meter dash

Who Is Fastest?

When we watch a track meet or other sporting event, we cheer for the fastest runners. But compared with other living things, humans are not all that fast. In fact, the very fastest humans run at speeds of only about 35.4 kilometers per hour (22 mph.)



A cheetah

Speed is important for the survival of most living things. The cheetah, which runs at speeds of up to 113 kilometers per hour (70 mph), is the fastest living thing on land. The cheetah depends on its speed to capture food. For many animals, survival often depends on being faster than the animal that is chasing you.

Fish swim much faster than humans due to their more streamlined bodies. The fastest fish is the sailfish. It zips through the water at speeds of up to 113 kilometers per hour (70 mph).

The fastest living thing moves through the air. It is the peregrine falcon. This falcon reaches speeds of 435 kilometers per hour (270 mph) as it dives to capture other birds in flight. Even sailfish and cheetahs are slow compared to the falcon.

But humans are not limited by our bodies in order to move from place to place. We use our brains to come up with ways to travel faster. Let's look at some of these ways.



A lithograph of Maud S, the fastest trotter in the world, in 1874



A man riding the "Accelerator," an early bicycle (1819). It could travel uphill at the same speed as a man walking. Downhill it could travel as fast as a galloping horse.

Bicycles

Humans are the only animals that build mechanical things. We keep inventing new ways to go faster and faster. Long ago we found that by building and riding bicycles, we could go faster than riding a walking or trotting horse. A bicycle didn't take up as much space as a horse. We didn't need to feed and water it, and we didn't have messes to clean up.

When we ride a bicycle, the air in front of us seems to push back. This is called air resistance. As we ride faster, the air seems to push back harder. In 1899, a bicycle racer named Charles Murphy had the idea of reducing air resistance by riding his bicycle behind a train. By riding behind a train, Murphy was able to go 98.5 kilometers per hour (60 mph). The land speed record for bicycles is now 244.6 kilometers per hour (152 mph). This record was set by a bicyclist riding behind a race car.



Charles Murphy riding behind a train to reduce air resistance and go faster



A 1794 ship showing sails puffed up by the wind

Boats

When humans first started using boats, speed was governed by how fast the river flowed, how quickly and hard we paddled, and how hard the wind blew. By using sails, we were able to go faster than paddling. Because of drag (pull) of the water on the boat, sailors were limited in their speed. As boat designs improved, sailors were able to go faster, but never faster than the speed of the wind and the current.

The invention of the steam engine brought about huge changes in travel. When the steam engine began to be used to power ships, people could go even faster. They were able to go faster than the wind and water. They could travel *into* the wind and against the current of the water.



The SS United States, powered by a steam engine, was the fastest ocean liner ever. It crossed the Atlantic Ocean at an average speed of 35 knots (65 kph, or 41 mph). Its top speed was 44 knots (80.5 kph, or 50 mph).

The drag of the water on the bottom of the boat slows it down. Modern racing boats are designed to barely touch the water as they skim over the surface. This is called hydroplaning. A hydroplane boat can go as fast as 354 kilometers per hour (220 mph). The fastest boat in the world is a jet-powered hydroplane. It has gone 510.2 kilometers per hour (317 mph).



The hydroplane Miss Madison on the Ohio River



An early steam locomotive

Trains

The steam engine was first used to power boats and tractors. When the train was invented, the steam engine was used to power it, too. These trains carried people and products faster than boats or wagons could.

Early trains reached speeds of up to 65 kilometers per hour (40 mph). Some passengers, used to much slower horse-drawn carriages, fainted when traveling at these speeds.

For years, train speed was limited by the train's wheels rolling over steel rails. This problem was solved when magnetic trains were invented. Magnetic trains ride on a thin cushion of air.

Modern trains, called bullet trains, with new powerful engines, now travel at speeds of nearly 320 kilometers per hour (200 mph). There are plans for even faster trains. These trains will travel through tubes at over 800 kilometers per hour (500 mph).



A high-speed train in Japan



An early automobile, the Daimler car, in 1886

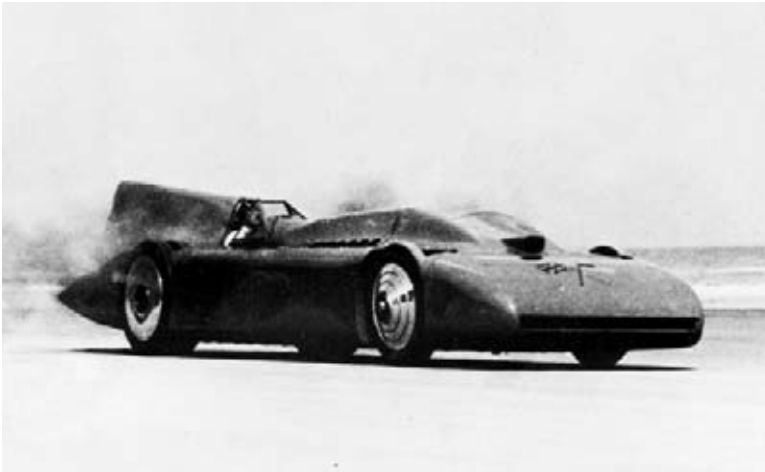
Automobiles

When automobiles were first invented, they were very slow and fragile. The first car was not much more than a small horse buggy rolling on bicycle wheels, with a small, noisy engine powering it. It was kind of like a golf cart with a lawn mower engine. Can you imagine a golf cart as your family car?

Some early cars also had steam or electric power. The first recognized land-speed record for an automobile was set in 1898. An automobile powered by an electric motor went 63.13 kilometers per hour (39.24 mph). Imagine going down a bumpy dirt road in a golf cart at almost 64.4 kilometers per hour (40 mph). The driver must have had quite a thrilling ride!



An early automobile race, 1900



Sir Malcolm Campbell in one of his Bluebird cars trying to set a new world land speed record on Daytona Beach, Florida, 1934

As engineers, designers, and builders improved cars, the cars went faster and faster. In the early 1900s, there were no paved roads to drive fast on. People found that they could drive on the hard-packed sand on ocean beaches at low tide. For many years, the fastest speed records were set on beaches. People discovered that they also could drive fast on dry lake beds in the desert. Places like the Bonneville Salt Flats in Utah and the Black Rock Desert in Nevada are flat, open areas extending for miles. Vehicles are safely driven at high speeds over these dry lake beds.

The land speed record for wheeled vehicles is held by a jet car that is powered by two jet fighter engines. In October of 1997, Andy Green became the first human to go faster than the speed of sound in a land vehicle. He went 1,228 kilometers per hour (763.035 mph) in a jet car called the Thrust SSC. It went from a complete stop to 965.6 kph in 16 seconds.



Andy Green driving his Thrust SSC at 1,228 kph (763 mph)



The Lockheed SR-71 is the fastest jet airplane in the world.

Aircraft

Humans have always wanted to fly like birds. Over the centuries, inventors have tried many different ways to fly. The first airplanes used engines that drove propellers. About 40 years later, the jet engine was invented, and the speed of aircraft really increased. The speed record now for aircraft is 3,367 kilometers per hour (2,193 mph). Can you imagine flying all the way across the United States in one hour and 15 minutes? An average jet airliner now takes about five and a half hours to make the trip.



The Saturn V launching an Apollo mission to the Moon

If you want to move really fast, become an astronaut. In order to escape the gravitational pull of the earth, rockets must go over 45,062 kilometers per hour (28,000 mph).



Conclusion

It is unlikely that, in the future, cheetahs will run faster or sailfish will swim faster. Nor is it likely that falcons will fly faster. Even humans are not likely to run much faster than they do now. But that won't stop humans from finding other ways to go faster.

At one time, humans wanted to travel at the speed of sound. Eventually, we found ways to make planes that traveled faster than sound. Today, rockets blasting off for space travel several times greater than the speed of sound. No doubt, humans will continue to find ways to go faster over land and water and through the air.

Humans probably will not be satisfied until we are traveling at the speed of light. At that speed, we could circle the globe more than 7 times in a single second. It is hard to imagine moving at such an incredibly fast speed.



Reading a-z

This image shows a blank sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

SKILL: COMPREHENSION



Name _____

INSTRUCTIONS: Look at the following words and place them in the appropriate column.

people tried hour air eat centuries
search their found train brain variety
going house stream sailfish through either

SPEED • LEVEL R • 2

Digraphs (2 letters, 1 sound)

Diphthongs (2 letters, 2 sounds)

SKILL: IDENTIFYING DIGRAPHS AND DIPHTHONGS

Skydiving

A Reading A-Z Level R Leveled Reader

Word Count: 1,594



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Skydiving



An Interview with Bob Gates
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Bob Gates

INTRODUCTION

Bob Gates is the owner of, and instructor at, Cleveland Parachute Center in Cleveland, Ohio. He is married and has two children who are both skydivers.

Interviewer: How did you get started in skydiving?

Bob: My dad was one of the pioneers. When he thought I was mature enough, he put me through a class. So I started jumping because I grew up around it.

FIRST JUMP

Interviewer: How old were you when you made your first jump?

Bob: I was 13. It was scary and exciting at the same time. I remember wondering as I left the airplane what the heck I was doing.

Interviewer: Did you jump by yourself the first time?

Bob: Yes. It was a **static line** jump, where the parachute is opened for you. The static line is 10 feet (3 m) long and is attached to equipment in the plane. When you jump and are 10 feet out, the line pulls a pin that releases the parachute. It takes about five seconds for the parachute to open fully. You steer the parachute down and land it yourself.

I remembered to do the **arch**, which means to spread out and push your hips forward. That helps make you stable as you fall through the air.

Interviewer: What happens if you don't do that?

Bob: You can flip. If you're flipping when the chute's opening, you can get tangled in the lines.

Interviewer: What did it feel like the first time you jumped?

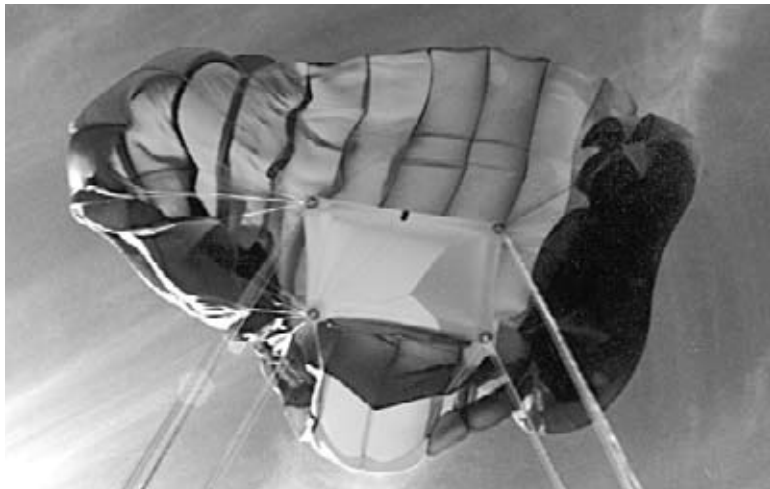
Bob: I remember the quietness. No matter where you are, even if you think it's real quiet, there's noise. But during that first ride down there was absolute silence.

Interviewer: There's no sound of wind rushing?

Bob: No. It was definitely a unique experience to have no sound.



Four-person star formation



Parachutes sometimes don't open properly, such as in this photograph. That's why skydivers wear reserve parachutes.

SCARIEST MOMENT

Interviewer: What's the scariest thing that's ever happened to you?

Bob: I had a **canopy** collision once, which means my canopy collided with someone else's. The other person fell away, and I was left tangled so that my legs were tied up in the chute. I was dropping to Earth, and the chute was opening up and collapsing, then opening up and collapsing. There was a moment when I didn't think I was going to make it. Luckily, it opened and stayed open just before I hit, so I lived through that one.

Interviewer: If your legs are tangled, does that mean you're not able to land?

Bob: It means I couldn't get rid of the chute or do anything. I had opened my reserve chute, so I had both chutes out, but they were still collapsing and opening. My legs were still tangled in the lines when I landed. Instead of landing on my feet, I landed on my back. I survived that, but it was a scary moment.



Good training and faith in the equipment will allow a skydiver to handle almost any difficult situation.



Jumpers need extra oxygen when they go very high.

HOW HIGH, HOW FAST?

Interviewer: How high do you go in a plane before you jump out?

Bob: We normally try to jump as high as 13,000 feet (3,962 m). We could jump at 2,000 feet (610 m) and pull the parachute right away, but we like to fall for a while before opening the chute. That's called a **free fall**. You can't go higher than 13,000 feet because there's not enough oxygen in the air.



Free-flying friends enjoy a sunset jump.

Interviewer: How long can you free-fall if you jump from 13,000 feet?

Bob: Just a whole minute. You speed up to approximately 120 miles per hour (193 kph). A skydiver could get to over 200 miles an hour (322 kph) on his head.

Interviewer: What do you mean "on his head"?

Bob: The normal position is with your stomach facing down to the earth. "On your head" means you fall head down or feet down. You have less **wind resistance**, so you fall faster.

Interviewer: How do you know when it's time to open the parachute?

Bob: Beginners start with an **altimeter** made for skydiving. It is an instrument that shows them how high they are. They read the altimeter, and at the right altitude they pull the **rip cord**. Beginners open at 3,000 feet (914 m) or higher, which gives them more time to react if something goes wrong. After a while, they learn to look down and tell when the earth is getting close enough. An experienced skydiver also develops an internal clock, a timer, the more he jumps. He'll know when he's had enough fun.



When the ripcord is pulled, a pilot chute deploys to pull out the main canopy. The person on the left is an instructor who is making sure that the parachute deploys correctly.

Interviewer: Does it seem like a short or a long time when you're falling?

Bob: The first time you do a free fall, it seems like a short time, because everything is so new. As you get more experience, you can do a lot in those 60 seconds of free-fall time. But it never lasts long enough.



Skydivers jump from multiple airplanes to make formations. The world record is 297 skydivers in one formation.

The “toggles” allow a skydiver to steer the canopy and land safely.



TRAINING

Interviewer: What do you have to learn before you can jump?

Bob: In six hours of training, you learn everything necessary to make that first jump as safe as possible. You learn the commands you’ll hear in the airplane and how to leave the airplane. You learn the arch position for falling with the hips forward, all spread out. You learn how to check your chute. You learn how and when to use your second chute and how to steer down. You learn how to find the drop zone, using aerial photos.

You learn the “landing flare,” which means you have to know how to pull the **toggle ropes**. These are two lines, one for each hand. They are attached to the back of the chute. Pulling on them helps you control the speed and direction of your fall. You learn how to roll when you land and how to pick up your chute.

Interviewer: Do you have to repack the chute?

Bob: You learn to pack your chute, but experienced, certified **riggers** actually pack the chutes for less experienced jumpers.

Interviewer: Do you jump tandem first and then solo?

Bob: You could do a **tandem** first, which means you jump connected with an instructor. Or you could do a static line for your first jump, where your chute is opened for you. Or you can do a free fall first, where two instructors hold your harness at exit and you free fall with them. They’re there to help you stabilize and to give you hand signals. But you pull your own ripcord and steer your parachute down and land it yourself.



Skydivers wear helmets, goggles, and colorful jumpsuits for protection and style.

EQUIPMENT

Interviewer: What kind of equipment do you need?

Bob: You need two parachutes, a harness, and a container that holds the parachutes. You don't need special shoes—I know experienced skydivers who land in bare feet. You should wear a hard helmet, goggles, and a jumpsuit, which is a one-piece suit with a zipper up the front.

COST

Interviewer: Is it an expensive hobby?

Bob: A skydiver spends \$1,000 to \$1,500 (U.S.) for the training course. The parachute costs between \$2,000 and \$4,000. Each season he does 50 to 100 jumps at about \$20 apiece.

TECHNIQUES

Interviewer: Are there different styles of jumping?

Bob: Yes, and serious skydivers try to get knowledge of all the different kinds of jumps. I've jumped in a **birdman suit**, which has large wings on the arms and between the legs, like a bat.



Bob Gates in his birdman suit

Skysurfing is an extreme sport that combines gymnastics with surfing and skydiving.



Interviewer: Does that make you stay up longer?

Bob: Yes. It takes you twice as long to come down. Instead of a one-minute free fall, you get two minutes. I've done the board too, where you jump with a board attached to your feet.

Interviewer: Do you stand on the board as you come down?

Bob: Yes—stand up, and do flips, cartwheels, twists, and spins.

Interviewer: Kind of like the tricks kids do on their bicycles?

Bob: Yes, except that we're free-falling toward the ground.

Interviewer: Do people skydive and land on a ski slope with a board?

Bob: The board is not for snow, though it doesn't mean someone hasn't tried. People do all kinds of stunts in skydiving. I saw a guy land with a unicycle, then release his main chute, and ride away. The imagination can go anywhere in skydiving. There are many different **disciplines**. There are accuracy landings, where you're trying to hit a small disc. Some experts hit the disc every time.

There are also free-fall formations, in which people jump together and hold hands as they fall. Some do very large formations. You can turn different formations as you're free-falling. The team that turns the most formations after a couple of jumps is the winner.



Fun in the air with a hula hoop



A family affair—Bob Gates (back), daughter Brianna (front), brother Mike (left), and sister Esther (right)

Interviewer: You mean you're changing the formation as you're falling?

Bob: Yes. It takes a lot of planning and a lot of practice. Teams that compete in this type of jumping do at least 1,000 jumps a year. The best known team is the Golden Knights. Some skydivers want to be competitive, but the majority just want to go up and play. When you jump from an airplane, you're only thinking about what you're doing, and your everyday worries go away. It's really exciting, flying without an airplane.



Flips in freefall at 10,000 feet (3,048 m) in the air

Interviewer: Are there other disciplines?

Bob: There's free flying, where you're falling head down, or feet down the whole time. It takes a lot more discipline because you fall faster, so things happen quicker. In free-flying competitions, a video person free-falls with you, taking pictures with a camera on his helmet. There's also freestyle, which is doing acrobatics in the air. It takes about 1,000 jumps in a discipline to get good at it.

HIS CHILDREN JUMP

Interviewer: You have children who skydive?

Bob: One daughter started at 13 and has over 200 jumps. She's a very good skydiver, but she's going to college now, so she doesn't jump as much as she'd like to. My younger daughter is just starting—she's 12. She did her first tandem and will be doing more.



Bob Gates with his 12-year-old daughter, Ashley, after her first tandem skydive.



You can really fly when you're skydiving!

WHY BOB SKYDIVES

Interviewer: Why do you skydive?

Bob: Most skydivers are really nervous at first. I remember having butterflies in my stomach every time for my first hundred jumps. But we skydivers love the feeling of extreme excitement—the **adrenaline** rush—when we jump. So even if we're scared, we continue to jump. Eventually that fear goes away. I've done over 4,000 jumps.

I believe we get addicted to the adrenaline rush. I notice it especially during the winter when I'm not jumping much. Most experienced skydivers jump every week in the summer. During the winter we could go months without jumping. I notice a big attitude change during that time until I get to do a jump.



Tandem jumping allows a new skydiver to jump with an experienced teacher using a parachute built for two.



Bob Gates and a tandem student prepare for landing.

SKYDIVING TRIVIA

- Parachutes may have been invented 900 years ago in China. More recently, in 1797, they were first used to jump from hot air balloons.
- Parachutes were first used to jump from airplanes in the early 1900s. The first military use of parachutes was in World War I.
- In World War II, the most famous use of parachutes was on D-day. **Paratroopers** (soldiers using parachutes) jumped from airplanes and landed inland not far from the beaches where Allied soldiers were coming ashore.

- Sport parachuting, or skydiving, developed after World War II using surplus military parachute equipment.
- The first parachutes were round, shaped like an umbrella, and could not be steered. They were originally made from silk. Today's sport parachutes are rectangular and are shaped like an airplane wing. They are designed with ropes and toggles for steering. Nylon and Kevlar® are the most popular materials.
- Parachutes used for tandem jumps are larger so they can carry the weight of two people. Very large military parachutes are sometimes used to drop heavy equipment from airplanes.



Equipment being dropped from a military airplane

GLOSSARY

adrenaline	a hormone that makes your body feel tense and excited (p. 22)
altimeter	a meter that measures distance from the ground (p. 11)
arch	a skydiving position in which a person falls stomach-down with the hips thrust forward (p. 5)
birdman suit	a suit with fabric stretched between the arms and legs to allow for a slower free fall (p. 16)
canopy	skydiving term for the fabric of a parachute (p. 7)
disciplines	different forms of one activity (p. 18)
free fall	falling without anything to slow you down (p. 9)
paratroopers	parachuting military soldiers (p. 24)
riggers	professional, certified skydivers and parachute packers (p. 14)
ripcord	the cord that releases the parachute and allows it to open (p. 11)
static line	a cord, attached to an airplane, that automatically releases a parachute (p. 5)
tandem	done with two people (p. 14)
toggle ropes	ropes on either side of a parachute that allow the skydiver to steer (p. 14)
wind resistance	the force of air pushing against a moving object (p. 10)

Name _____

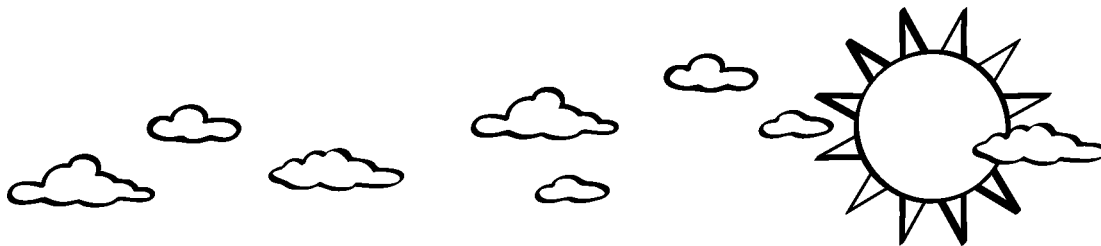
INSTRUCTIONS: Write a brief definition for each word. Then, answer the questions at the bottom of the page.

toggles _____

altimeter _____

canopy _____

tandem jumping _____



Would you ever go skydiving? Why or why not?

Name _____

INSTRUCTIONS: Make contractions from the available words. Choose 3 contractions and write them in sentences.

do

she

I

will

not

can

they

could

are

he

is

you

_____	_____
_____	_____
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Sentences

1. _____

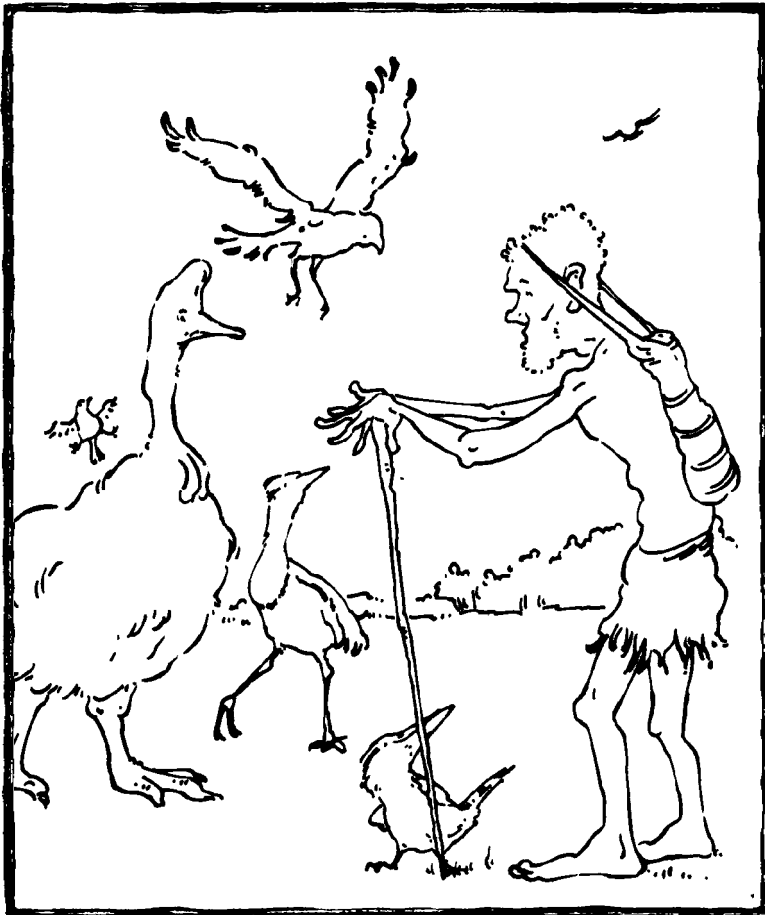
2. _____

3. _____

How the Robin Stole Fire

A Reading A-Z Level R Leveled Reader

Word Count: 1,595




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How the *Robin* *Stole Fire*



An Australian Aborigine Folktale
Retold by William Harryman
Illustrated by Anik McGrory

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How the Robin Stole Fire



An Australian Aborigine Folktale
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Illustrated by Anik McGrory

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This story is based on an Australian Aboriginal tale called "How Fire was Stolen from the Red-Crested Cockatoo," collected in 1923. It explains both the origins of useful fire and of the raging brush fires that periodically sweep the grasslands of the Australian outback.

How the Robin Stole Fire
Level R Leveled Reader
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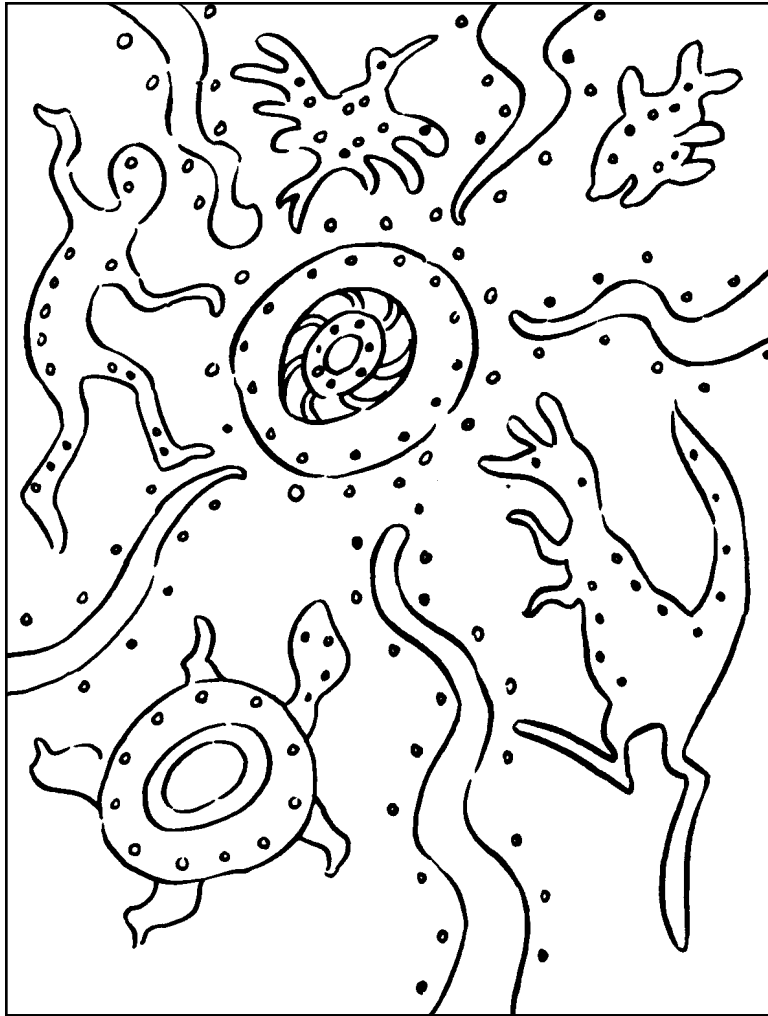
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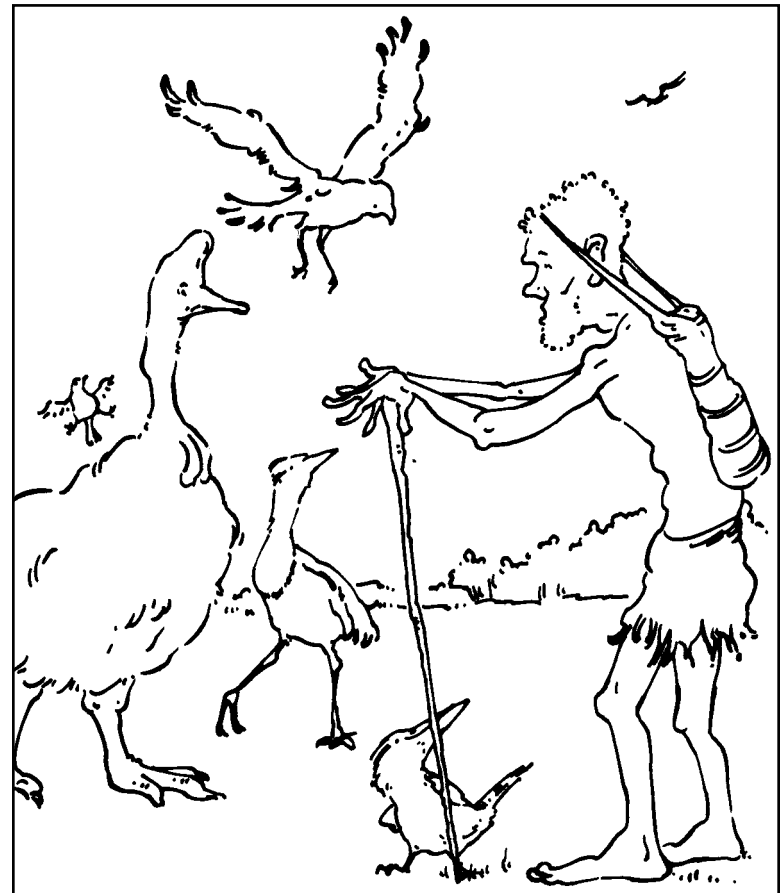
LEVEL R

Fountas & Pinnell	O
Reading Recovery	22
DRA	34



Ages ago, in the dream-time, the ancient time when the world was created, the first people lived on Earth as birds and other animals. They created the culture and traditions of today. This is a story from that time.

One day, near sunset, a group of hunter birds were returning to their village when they met a very old man. The old man was carrying a spear and an empty day pack, called a dilly bag. When the old man approached the hunter birds, he stuck his spear into the ground as a sign of peace.





The old man began to speak to the birds.
“I have come a great distance, my brothers,
and many moons have passed. I have traveled
to the place where the water speaks with the
voice of thunder. I have passed beyond the
mist-hidden mountains to the great red
plains. And I have traveled to the land that
lies beyond the dawn. I have had many
adventures. I would like to rest with you
for a while. In return for your kindness,
I will tell you the secret of the fire of the sun.”



The leader among the birds decided to take
the old man back to their village and give him
some food. A wonderful meal was quickly
prepared. When everyone had finished eating,
the tribe gathered around the old man and
waited for him to speak.

No one knew about fire during this time. When living things enjoyed the warmth of the sun, they often wondered how to take fire from the sky to provide warmth when the snows came. They didn't know how to use fire to cook food or harden spears, but they knew fire would keep them warm.

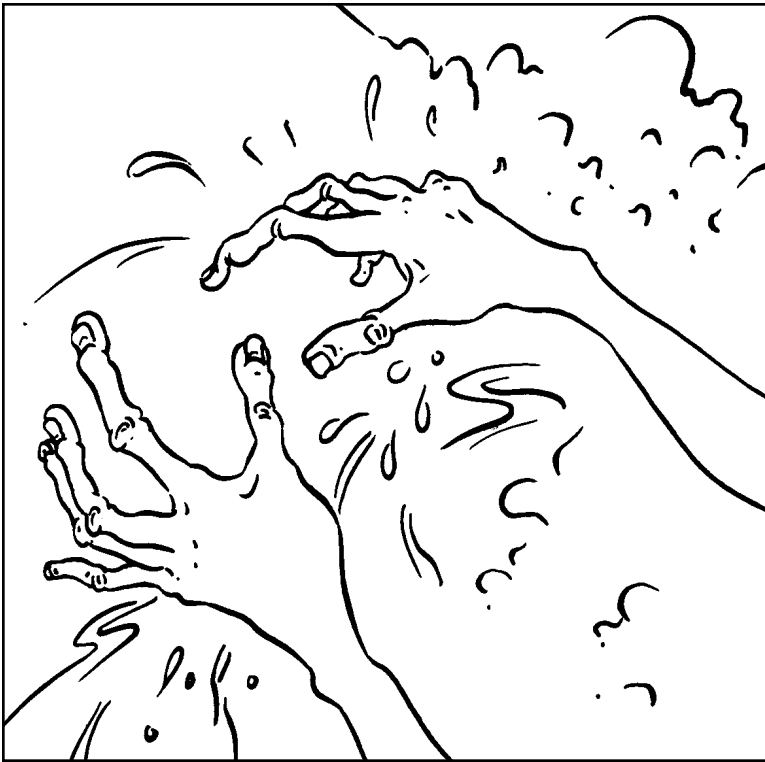


The old man began, “Now I am old, and my people are scattered like dead leaves in the wind. But I have journeyed to the land behind the mountains that hide the sun. There was no water, and the creeks were filled with animals who had died from thirst. I nearly died, as well.

“I hurried, without rest, afraid that I might not survive. One day, when my tongue was swollen with thirst, and my legs were weak, I saw a brilliant pool of water in the distance.”

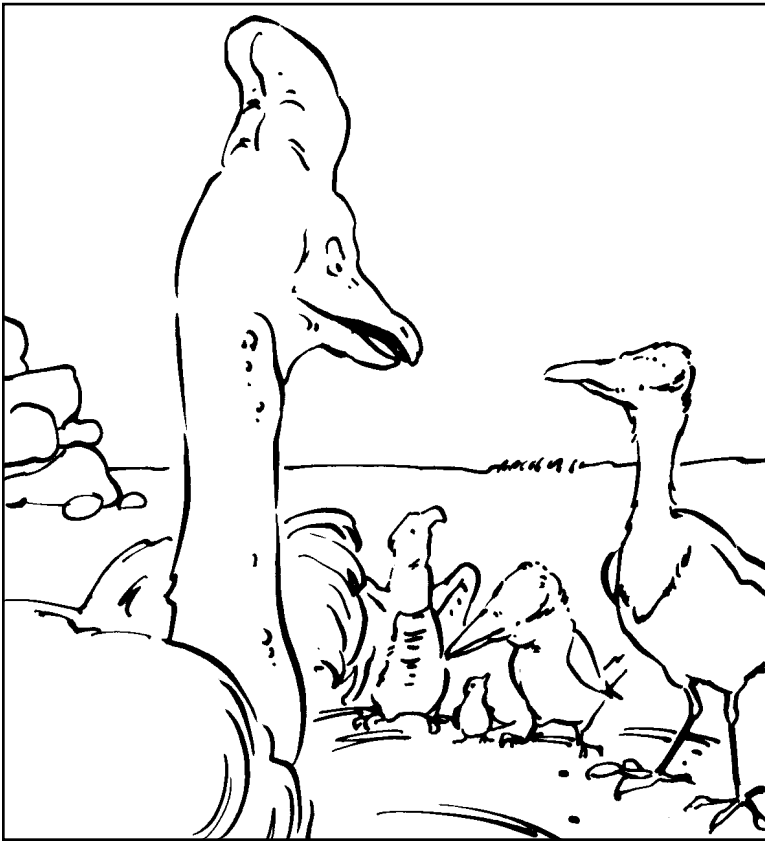
The old man continued, “I ran, stumbled, and crawled until I reached the water. When I lowered my face to drink, it was only sand—pure white sand shimmering in the sun.

“In my frustration and frenzy, I began to dig and dig, until my hands were sore. Beneath the sand, the dirt grew hard, like clay. But I found water, and the small trickle saved my life.”



The old man finished his story: “Having rested for a day, I felt refreshed. After many days, I found a land where large trees grew. One morning, before the sun had risen, I saw its fire shining through the trees. I was curious, so I walked nearer. It was then I saw Mar, the Cockatoo, take the fire from under his wing and hold it in his hands. I accidentally stepped on a dry stick, and he heard me. As I ran away, he threw a spear, but he missed me. From there I traveled back to the hunting ground of my people, but they were gone. I followed their tracks until I found you. And now, here I sit, offering you the gift of fire, if one of you is brave enough to steal it from Mar.”

The members of the bird tribe were very excited at the prospect of having fire for the long, cold winters. They all spoke at the same time, trying to convey their feelings and ideas for stealing the fire from Mar, but they did not listen to each other. Finally, one of the elders silenced everyone and said that he had devised a plan.



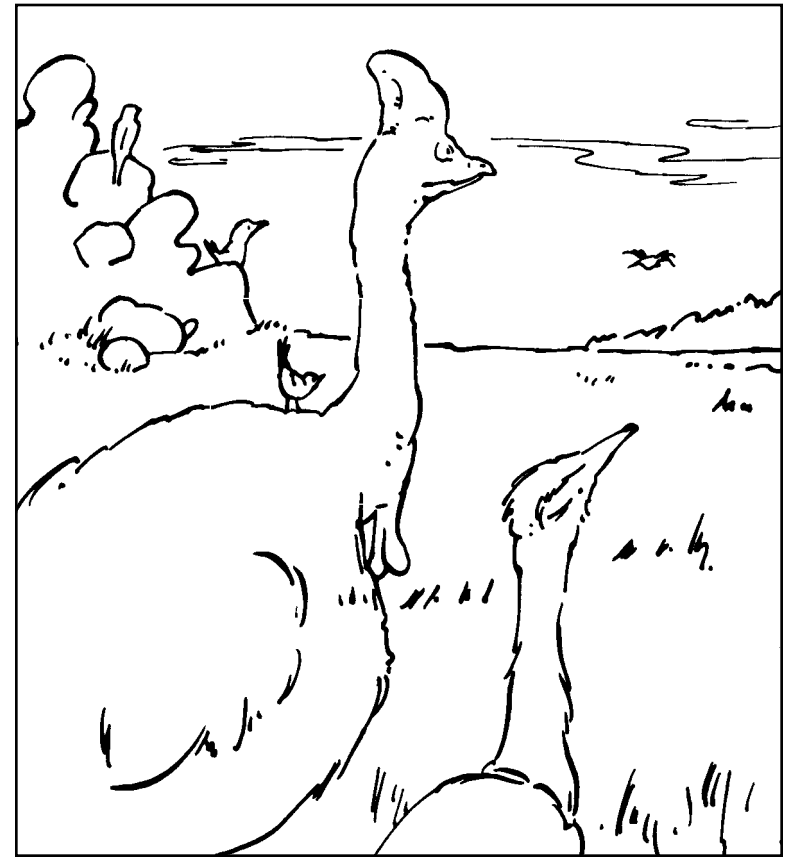
They decided they would hold a party called a corroboree and invite Mar, the Cockatoo, to the celebration. While he was there, someone would try to steal fire from him. At the celebration, there was singing and dancing, and lots of food and drink. There were even mock fights and tests of strength. The birds offered Mar a piece of kangaroo flesh, one of the choicest pieces, but he refused it. Then they offered Mar the kangaroo hide, which he accepted before leaving the party.





The feast quickly lost its fun when Mar left and the tribe was not able to steal the fire from under his wing. They even began to doubt the old man's story. They were not sure the fire was under Mar's wing. One of the smallest birds, a Wren named Prite, decided to follow the Cockatoo back to his camp. He traveled many days, always staying out of sight. By the time Mar had reached his camp, Prite was very weary. But when he saw Mar take the fire from beneath his wing, he flew back to the tribe to tell them what he had seen.

Everyone was very proud of Prite for his ingenuity and bravery. It appeared that Prite had proven the old man's story was true. The elders held a meeting to discuss this news. It was decided that Tatkanna, the Robin, would make the journey to Mar's camp to steal the fire. Early the next morning, Tatkanna set out on his long journey.





Tatkanna traveled for many days. The sun was very hot during this time, and Tatkanna became thirsty and tired. But he continued and arrived at Mar's camp one day just as the sun was setting. Tatkanna was glad he would be able to sleep for the night before having to steal the fire. He unrolled his kangaroo rug and quickly fell asleep.



Just before the sun came up, Tatkanna awoke and began to watch Mar. While he was watching, Mar took the fire from beneath his wing to light a stick on fire, which he used to burn the hair from the kangaroo hide he had been given. When Tatkanna saw Mar with the stick on fire, he charged into the camp and grabbed the stick before Mar knew what was happening.

Tatkanna was so eager to steal the fire that he got the stick too close to his breast and singed all the feathers. From that day forward he was known as Robin Redbreast. Tatkanna was very frightened at having been burned. As he flew with the stick, he accidentally set fire to the dry grass. Soon, all the grass and bushes were burning, and the fire spread quickly.



The fire roared like ocean waves as it spread out over the landscape. Birds and other animals raced just ahead of the flames, trying to find any place to be safe. But the fire just kept growing. Tatkanna was well ahead of the flames and didn't realize what he had done. Behind him the bush was reduced to a black carpet of ashes.





When Mar realized what had happened, he began to chase Tatkanna. He quickly realized that fire had been set free and that he would no longer be able to control it. He was very angry about his power being taken away from him. If he was no longer the only one to possess fire, he would be just another common cockatoo, and not someone important. He decided that he would kill Tatkanna when he found him, as punishment for stealing the fire.



When Tatkanna arrived back at his tribal camping grounds, he was very afraid. Mar was right behind him. Tatkanna was only a little guy and would be no match for Mar. He begged his good friend Quartang, the Kookaburra (a larger bird), to defend him. Quartang agreed.

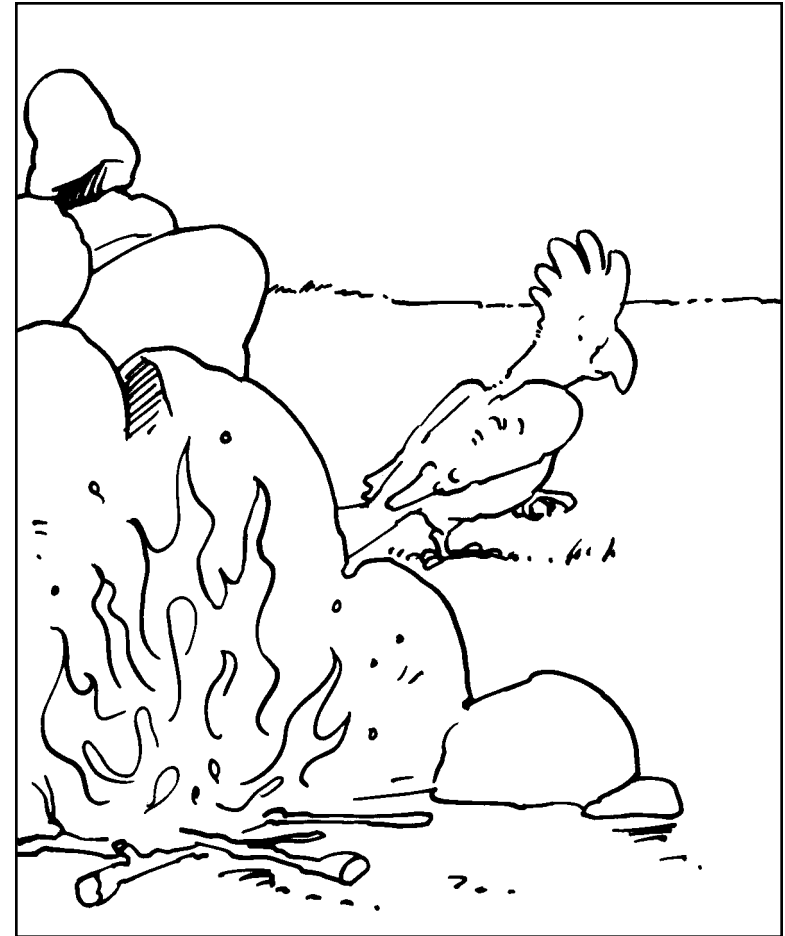
When Mar arrived, Quartang stepped in front of Tatkanna and pushed his small friend away. Mar was visibly angry. “Let me have him,” he said. “He stole my fire and then set the outback aflame in his haste to escape.”

Quartang replied, “The fire is for everyone now. No one should freeze during the cold winters anymore.”

Mar was still enraged: “If you stand in my way, then I will kill you, too.”

Quartang wasn’t very fond of the idea of dying, but he had promised to defend Tatkanna as best he could.

Mar lunged at him and the two fought for several minutes. Mar was much bigger and stronger than Quartang and easily defeated him. Quartang retreated to the trees to save his own life.



But Mar had had enough fighting. He was very sad and depressed. He glanced at the small pile of wood the tribe had set on fire as he walked away.

Whenever the tribal people see a Cockatoo, they remember how fire was stolen from him.

The tribe was very pleased with the bravery of Tatkanna. They prepared a great feast for the celebration and invited some of the local tribes to the corroboree. With fire, they could dance late into the night and sing until the dawn. They gladly shared their gift of fire with their neighbors.



Tatkanna was the center of attention. But he was shy and missed his friend Quartang, who would not come out of the trees because he felt ashamed of losing the fight. Tatkanna told him it was all right, that he still loved his friend. But Quartang still refused to leave the trees, and he has never left the trees since that day.

Whenever tribal people see a Robin Redbreast, they remember his heroic feat, which is recorded forever in the red burn on his breast.

Name _____

INSTRUCTIONS: Read the following sentences. Then add the speech marks.

1. Look at that old man, said one of the birds. He has a dilly bag.
2. Oh no! cried the robin, my breast is singed.
3. The old man continued, I ran, I stumbled, and crawled until I reached the water.
4. Mar was still enraged. If you stand in my way, then I will kill you too.
5. The old man finished his story. Having rested for a day. I felt refreshed.
6. Quarlong replied, The fire is for everyone now.
7. The old man began to speak to the birds.
I have come a great distance, my brothers, and many moons have passed.



Name _____

INSTRUCTIONS: Decide what you think the author's purpose is. Record your answers in the box.
Then write the evidence that helped you decide what the purpose was in the box below.

Author's Purpose



HOW THE ROBIN STOLE FIRE • LEVEL R • 2

Evidence of Author's Purpose

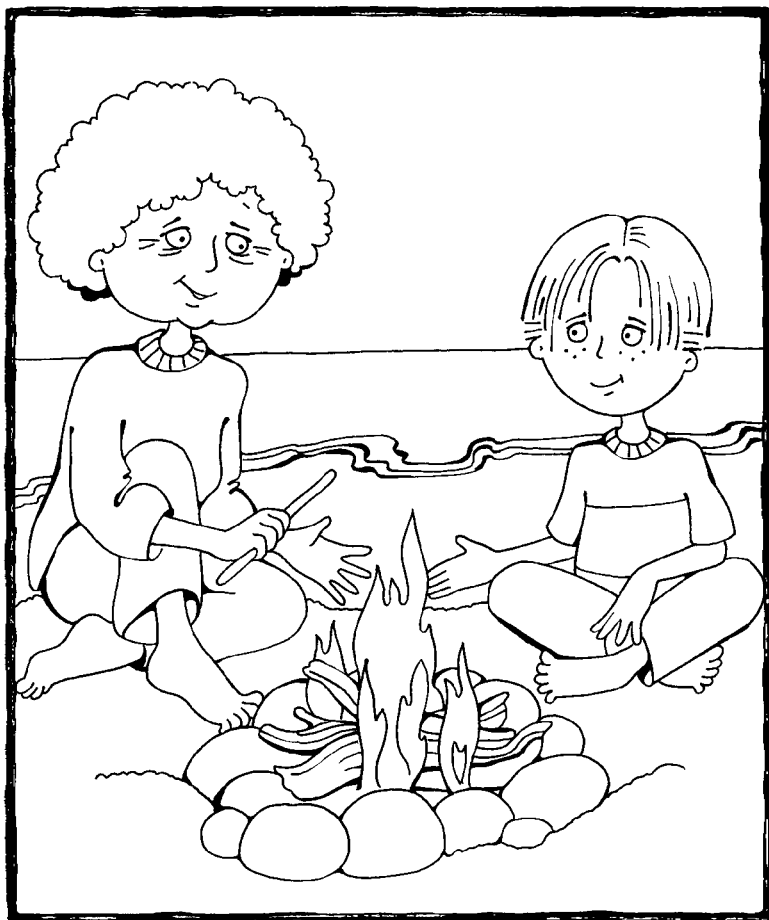


SKILL: AUTHOR PURPOSE

Turtle Tom

A Reading A-Z Level R Leveled Reader

Word Count: 1,581

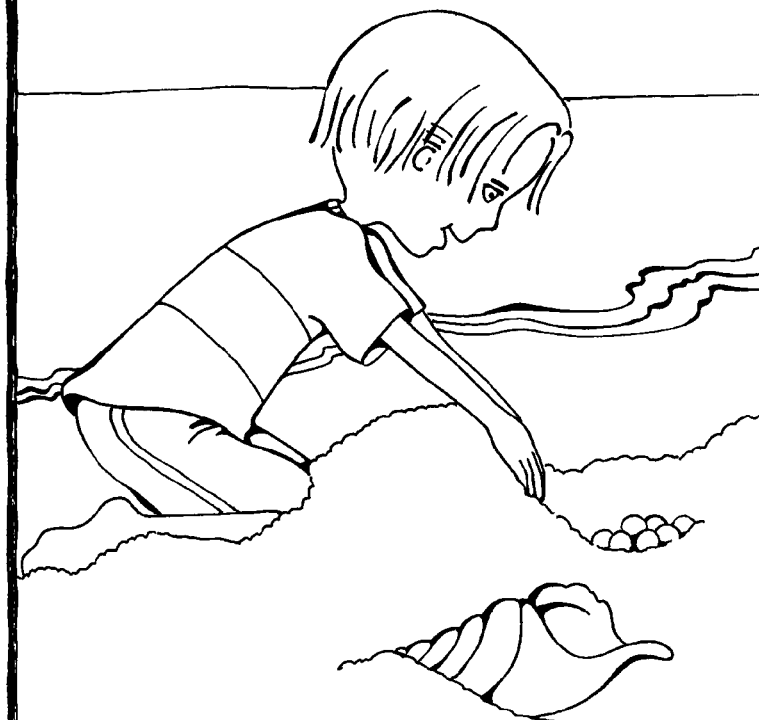



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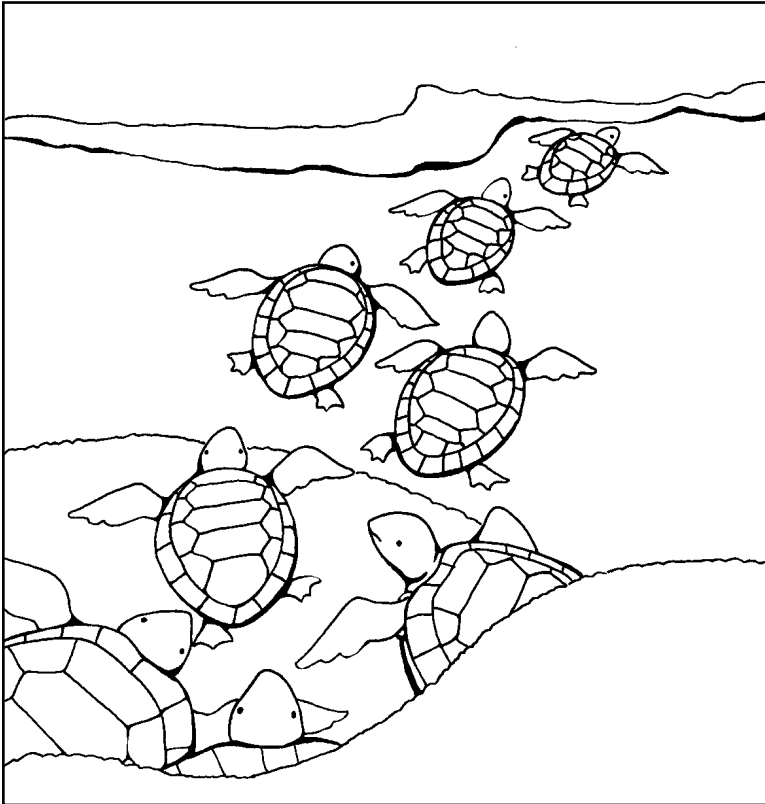
Turtle Tom



Written by Stephen Cosgrove
Illustrated by Carolyn LaPorte

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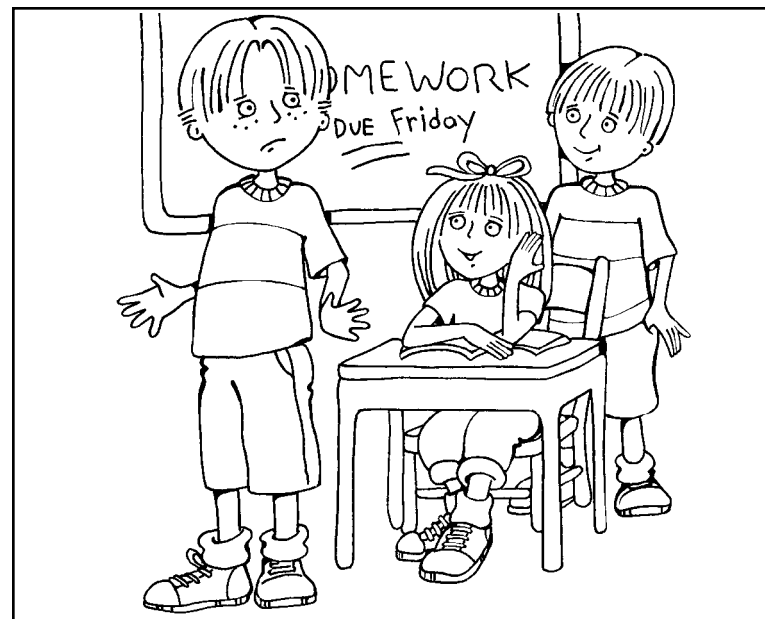


I've got the worst name in the world.
There is none worse.

My name is Tom T. Terdle.

Pretty dumb, huh? I don't have a middle name, only the initial. It has something to do with my grandfather and his father's father. And, my first name is Tom—not Thomas, just Tom. It lends itself to all kinds of things, all of which are pretty mean.

People, all kinds of people, call me all sorts of things. I haven't had one teacher who hasn't laughed after calling my name on the first day of school.



It usually goes like this: "Robert Miller?"

"Here!"

"Becky-Sue Porter?"

"Here."

"Tom T. Terdle?"

"Here."

"Does the 'T' stand for 'The,' as in 'Tom The Turtle'? Heh, heh, heh!"

Groan.

I've heard that every year and sometimes twice. That's because my dad has to move around with his job, and one year I went to three different schools. I'm in the fourth grade, and already I've gone to six grade schools. Every time we move, I have to get ready for the stupid names and a fight or two.

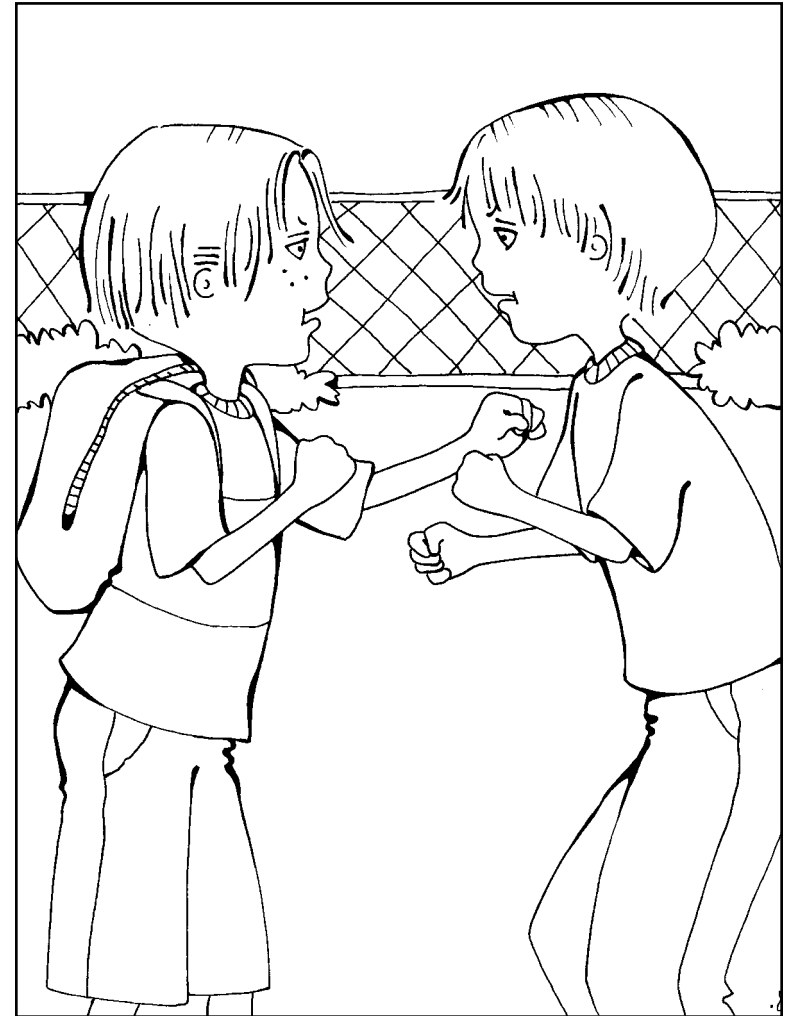


This time my dad was transferred to Port Aransas, Texas. We had been living in Utah, and at first I thought it would be really cool to live on the ocean. Port Aransas is on Padre Island, which is on the Gulf of Mexico. It wasn't what I expected. Because the water is protected, the waves are pretty small, and the water is warm. The land is warmer than the water, and when we first got here it was hot. I mean really hot!

If that wasn't bad enough, Texas schools start in the middle of August, so I didn't get much of a vacation. I didn't meet any of the other kids in my class until school had started. By now it was too late to meet anyone. I would probably get into another fight.

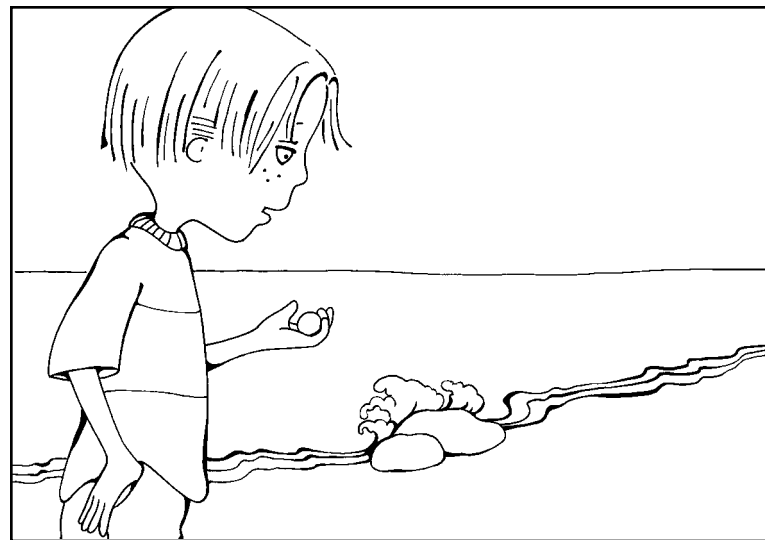


I don't like to fight, but some of the things other kids say are pretty nasty. One thing leads to another, and usually I hit somebody. Then, I end up in the principal's office with my mom having to drive over to the school.





All of which is the reason I ended up alone on the beach on a weekday. I got kicked out of school for three days for fighting. Still had to do my homework, but I couldn't go to school, which was just fine with me. Don't get me wrong, I like school—I just don't like the other kids always teasing me. If there's any salvation in what happened yesterday, it's that the principal kicked out the other four kids, too. He said I was provoked. That still didn't help me much at home.



In the first day, I got all my homework done for the entire three days. So I was allowed to go down to the beach and look for stuff along the shore.

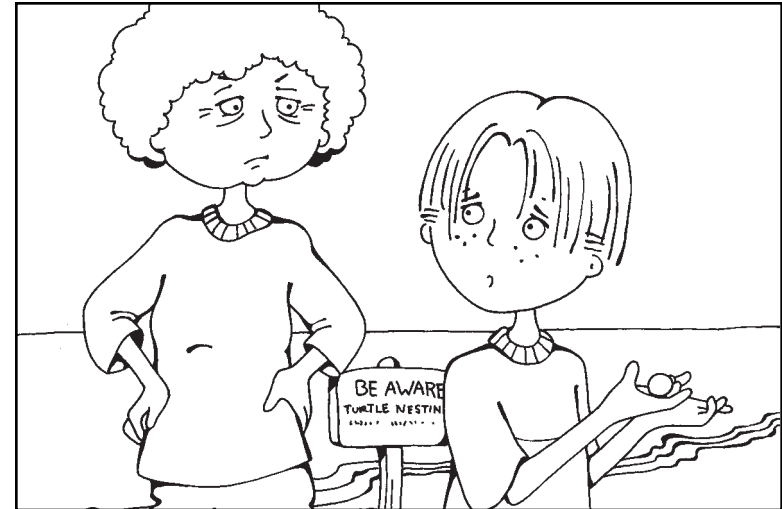
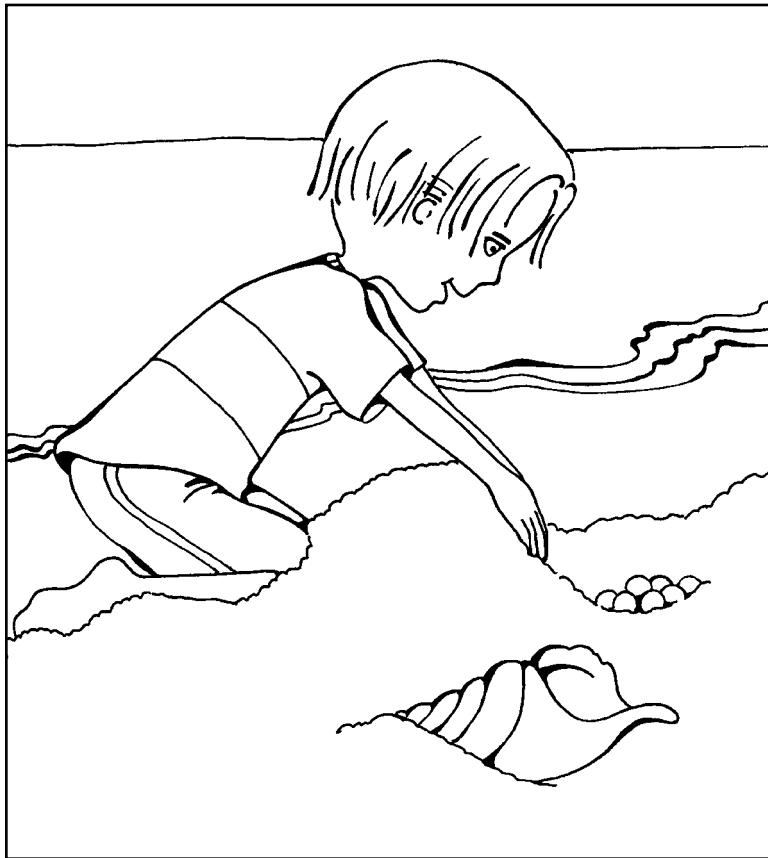
What I found is the last thing I wanted to find—turtles.

Actually, what I found first was eggs—lots of eggs buried under the sand. I thought it was a joke. Maybe somebody had buried a bunch of hard-boiled eggs after a beach party. But the eggs were weird. They were soft and kind of leathery. They didn't look like chicken eggs at all.

I kept digging and the deeper I dug,
the more eggs I found.

I felt like a dog digging for bones, and
minutes later I really felt like a dog.

My digging was interrupted by an angry
woman's voice, "What in tarnation are
you doing?"



"Huh?" I looked up, sand all over my face
and an egg in my hand. Standing behind me,
hands on her hips, was an old lady with fluffy
white hair.

"You are going to kill every one of those
if you don't stop it!" she said.

"Kill what?" I asked.

"The turtles," she said, taking the egg out
of my hand. "Don't you know how to read?"
She snapped her thumb at a sign on a
weathered post not twenty feet away: "Be
Aware! Sea Turtle Nesting Area! Violators will
be prosecuted to the full extent of the law!"

I felt bad. I started pushing sand back onto the remaining eggs. “No, no, no!” she said, kneeling down beside me. “The entire clutch has got to be put back—and gently.”

Together we carefully put the eggs back in the hole and began covering them with the warm sand.



“What’s your name, boy?” she asked.

I took a long look at her. She was even older than I thought, eighty or more, but she didn’t act like it. “My name is Tom T. Terdle,” I answered.

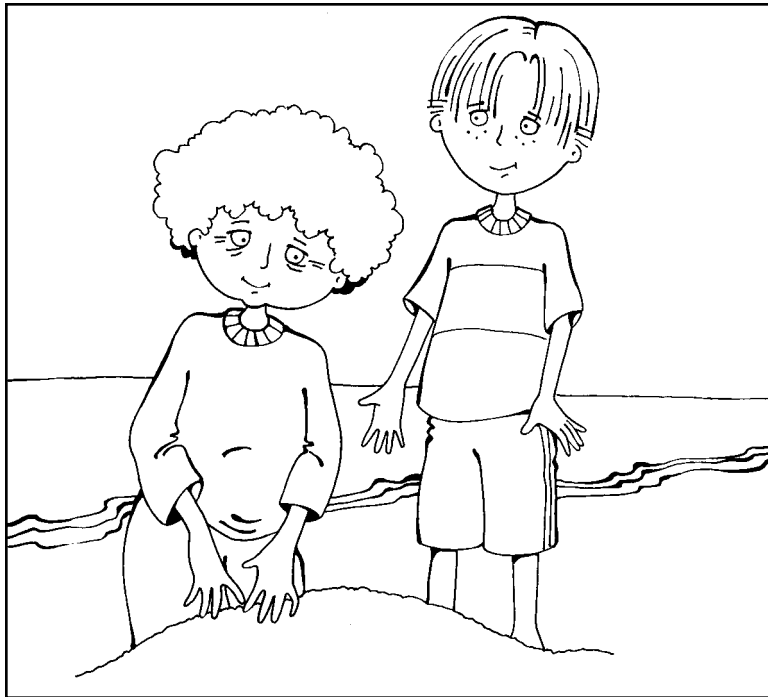
“Don’t you go getting smart on me, young man,” she snapped. “You can keep a civil tongue. I want your real name.”

“I’m not joking,” I answered, slipping into my normal defensive mode. “My name is Tom Terdle. T-E-R-D-L-E.”

“Harrumph,” she grunted. “Well, Tom, they call me the Turtle Lady around these parts, and I’m a deputy with the Port Aransas Police Department. Now what am I going to do with you? Besides endangering an endangered species, you are also skipping school.”

“I am not skipping school,” I said. “I got suspended for three days.”

“For what?” she asked as we finished burying the eggs.



She was easy to talk to, and I told her everything. When I say everything, I mean everything. I told about all the schools, and the kids making fun of me, everything.

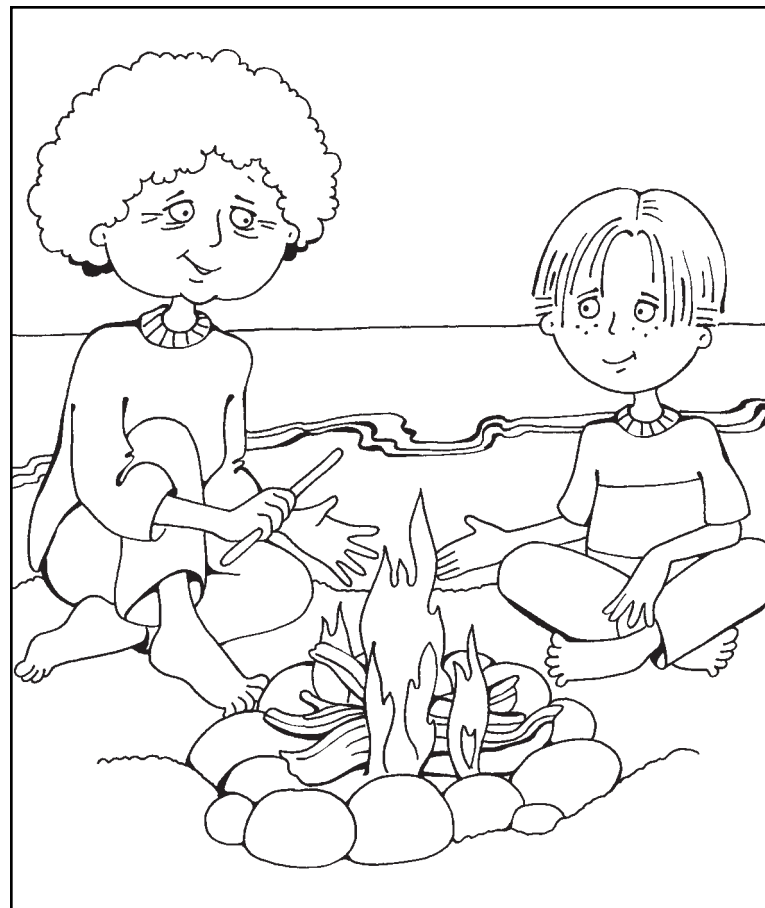
She smiled and laughed, “Well, I take a lot of pride in being called the Turtle Lady. I love turtles. So I really can’t sympathize with you about your name. Personally, I’d take it as a compliment, but then again, I’m not you.”





We began walking along the beach. “Look, Tom. You’re out of school for a few days. You help me patrol this area, especially tomorrow night when the eggs will probably hatch. If you help me, I won’t arrest you for digging up the nest.”

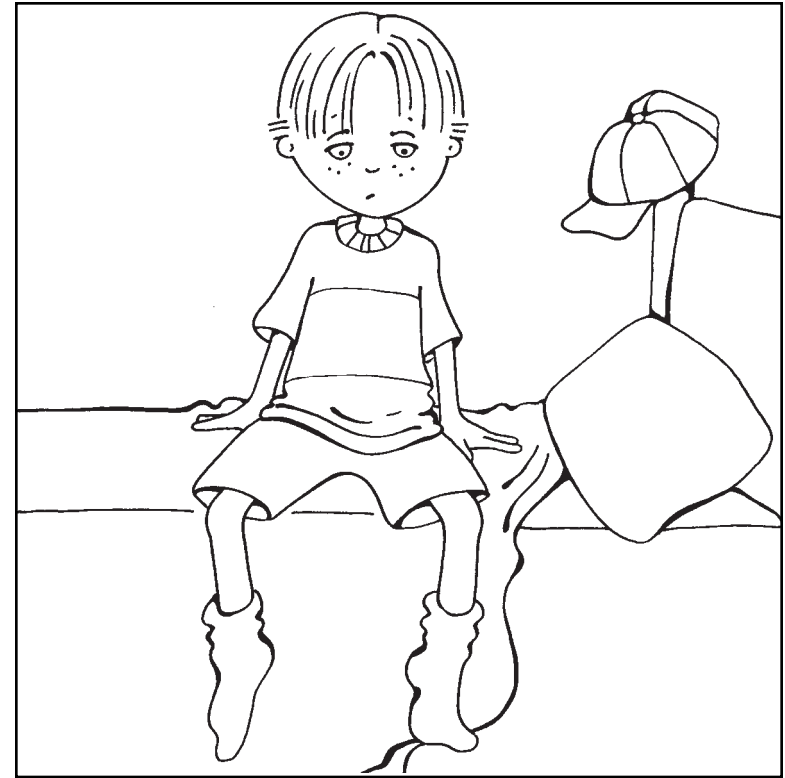
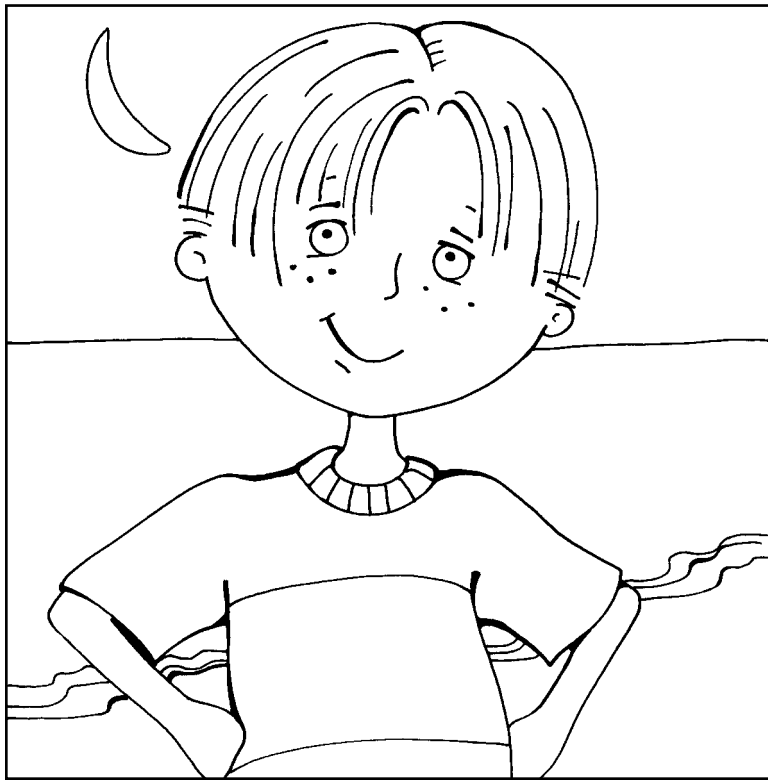
I would have agreed even if I wasn’t going to be arrested. She may have been old, but she was instantly my friend.



That night, after convincing my folks that I had to help the Turtle Lady, I met her down at the beach. We sat there around a driftwood fire and watched for some sign that the eggs were going to hatch. She told me about the sea turtles. I learned more in that night than I had in all my science classes.

I got to stay up all night, but nothing happened. As we put out the fire she chuckled, “It’s going to be tomorrow night. Always happens in the dark of the moon. Get some sleep, Turtle Tom. Tomorrow night we’ll see some turtles.”

For the first time ever, I wasn’t insulted by that name. In fact, coming from the Turtle Lady, it felt very special.



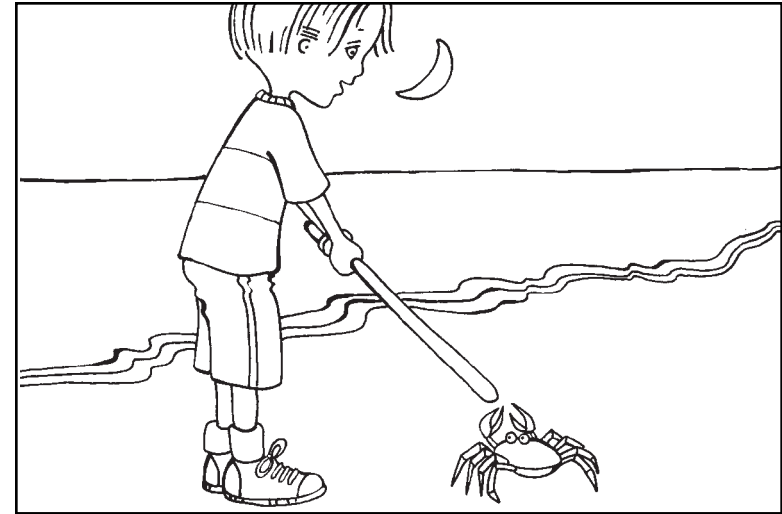
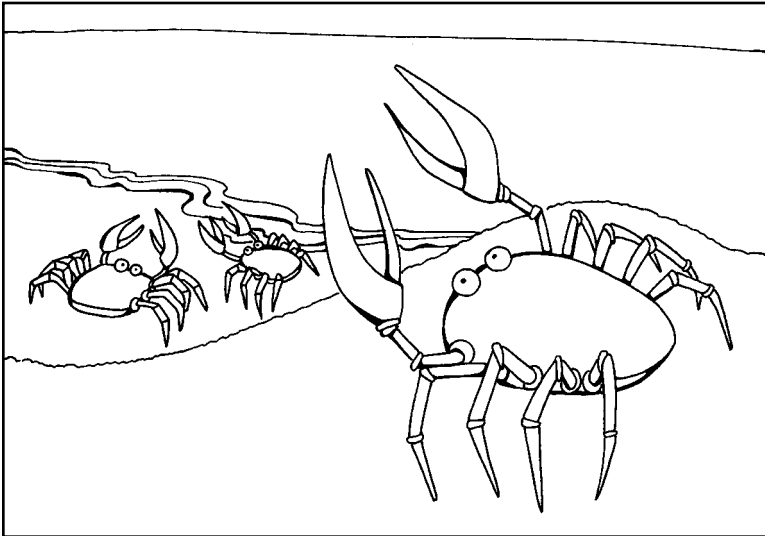
I got home just as my dad was getting up. I told him all about the night. He ushered me toward my room and told me to sleep. “One more night, son,” he said gently. “No turtles tonight and you’re going to be out of luck.”

I didn’t argue. I was too tired. I slept all through the day and at about six o’clock, Mom woke me up. I ate some dinner and then rushed back down to the beach.

That night was a wild night, a night I will never forget. We stood around the fire and at first I thought we were out of luck. Then, the Turtle Lady said, "Hear that?"

I could hear a funny scrabbling sound like something was crawling across the sand. "Turtles," I shouted.

"No," she laughed, "crabs. But that's a good thing in a bad way." She flipped on her flashlight and drew the light across the beach. There, scuttling across the sand against the fluorescent foam from the surf were hundreds of crabs.



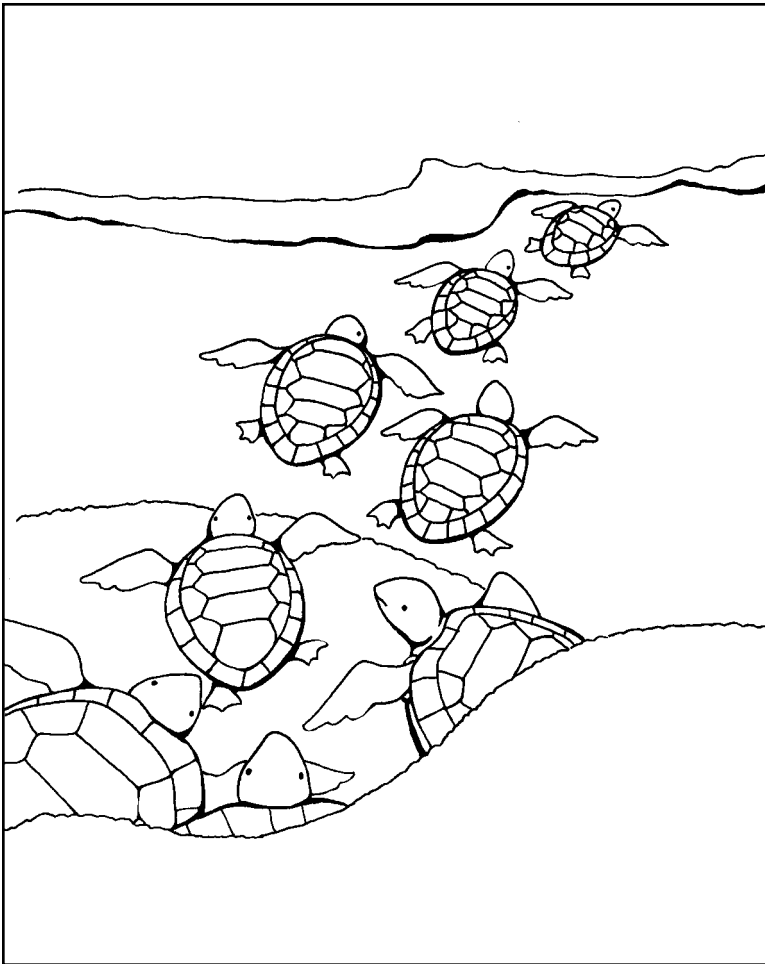
"Crabs? What's that got to do with the turtles?"

As we watched she explained that the crabs prey on the turtles. "It's a good thing," she said, "because it means the turtles are hatching. It's a bad thing because they will kill a lot of them."

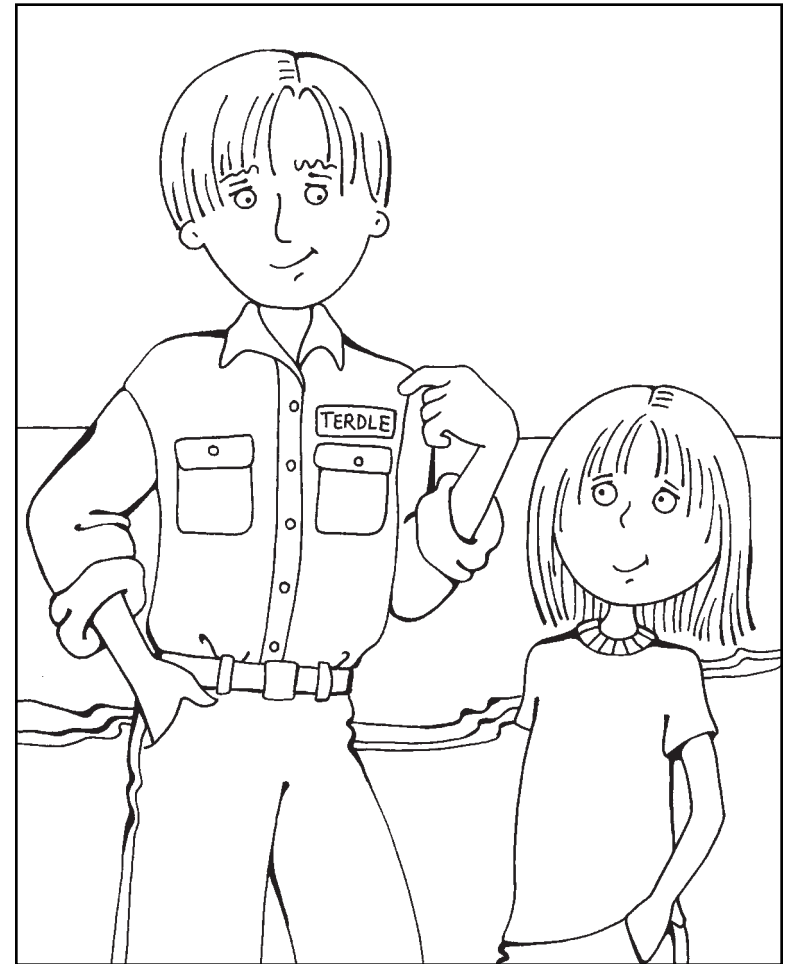
I grabbed a big stick and said, "Then I'll just kill some crabs."

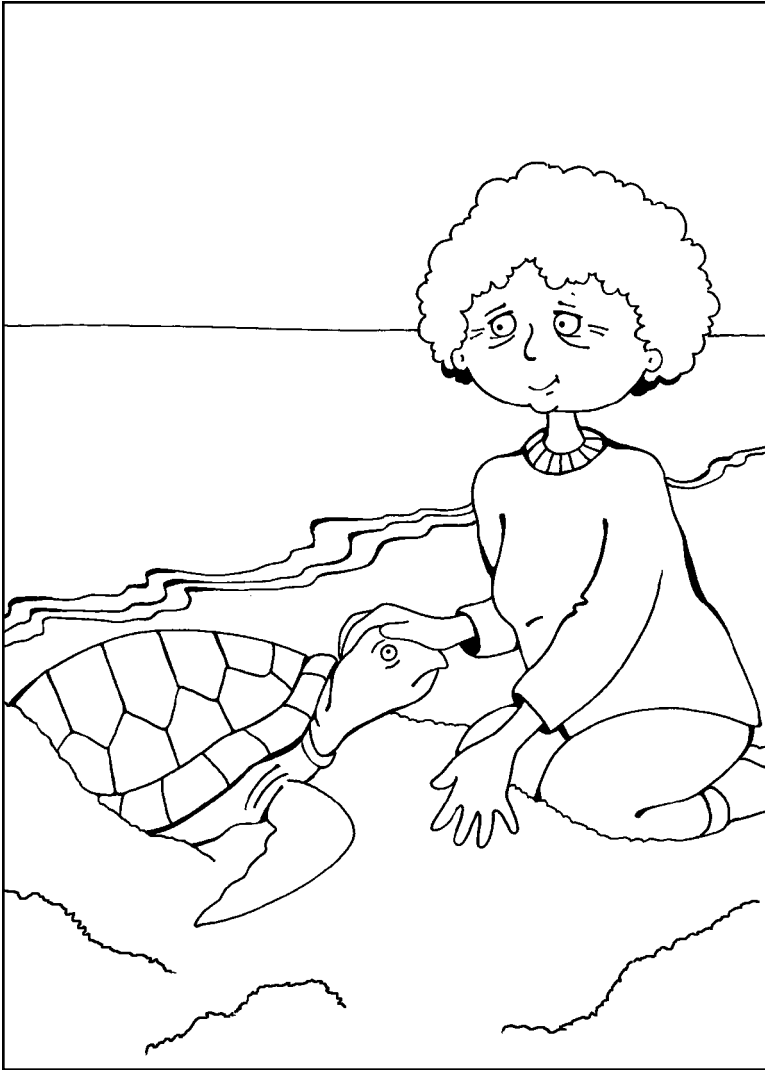
"No," she said gently, "the crabs are a part of nature. The turtles that survive will be the strongest. That is the way of nature. The weak die so that the species will be stronger."

In thirty minutes or so, they came. Starting like a trickle, then like a bigger wave, the little turtles began digging from the sandy nests and scurrying down to the surf. The crabs caught some of them, but many more made their way to the water.

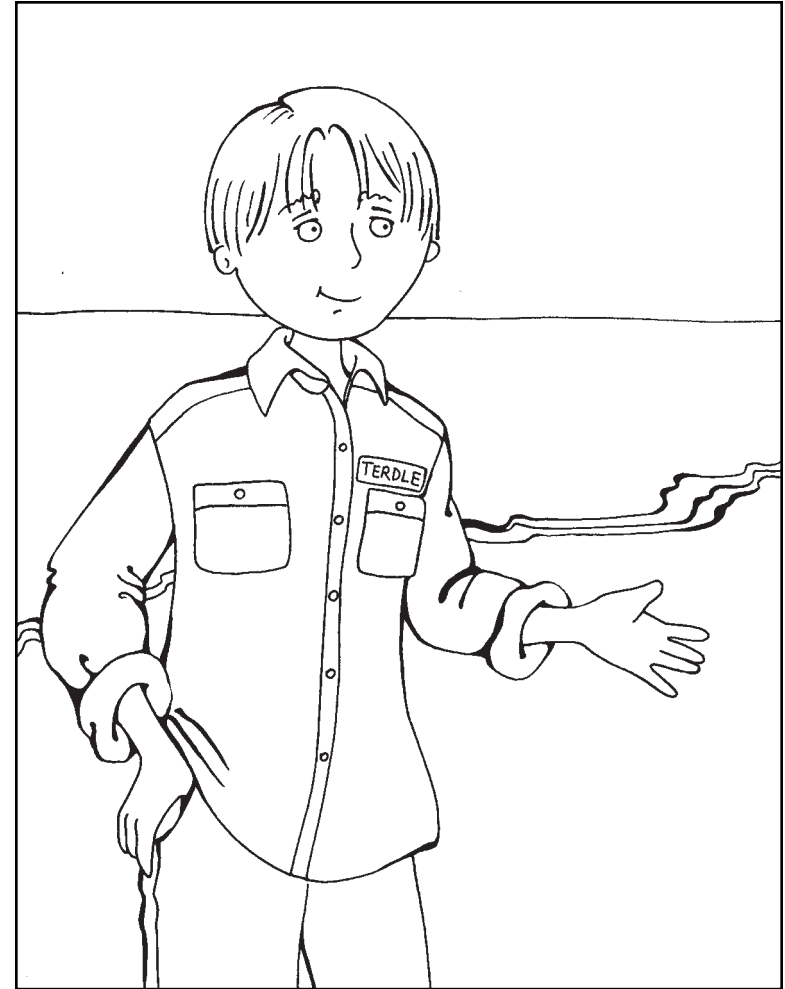


All in all that was the most amazing night of my life, some fifteen years ago. I long since have gotten rid of my sensitivity to being called Turtle Tom, and now as a marine biologist I am flattered when school kids who come to the marina call me that.





Who was the Turtle Lady? Her real name was Ila Loetscher, and she loved and protected the turtles like nobody else in Texas. She died at the age of 95.

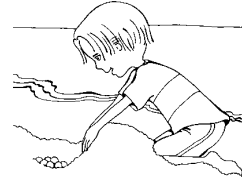


I often walk the beaches at Port Aransas. She is still there in spirit, guarding the sea turtles.

By the way, all my friends call me Turtle Tom.

Name _____

INSTRUCTIONS: Answer the following questions.



1. After the crabs scuttled across the sand, what happened next? _____

2. When did Tom start behaving differently from the way he did at first? _____

3. What did you find out about the relationship between Tom and Turtle Lady? _____

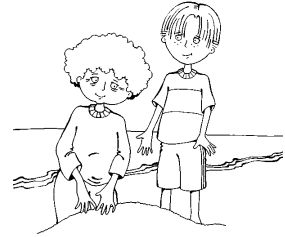
4. Suppose that Tom knew not to disturb turtle eggs, what do you think would have happened? _____

5. Is this a story that everyone should read? Why or why not? _____

Name _____

INSTRUCTIONS: Find these sentences in Turtle Tom. Write a synonym for the missing text word in each sentence.

Page 8 I don't like to fight but some of the things
other _____ say are pretty
_____.



TURTLE TOM • LEVEL R • 2

Page 10 But the eggs were _____.

Page 12 She _____ her thumb at a sign on
a _____ post not 20 feet away.

Page 13 Together we _____ put the eggs
back in the hole and _____ covering
them with _____ sand.

Page 17 She may have been _____, but she
was instantly my _____.

Page 19 In fact coming from the Turtle Lady it felt very
_____.

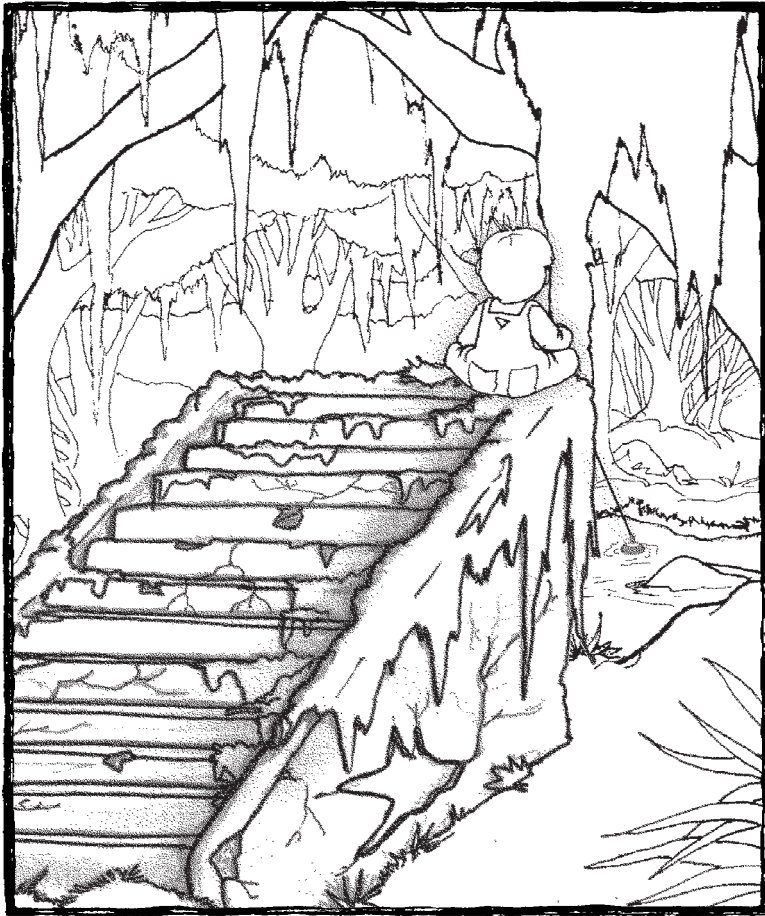
Page 20 I ate some _____ and then
_____ back down to the beach.

SKILL: WORD WORK

Fishing in Simplicity

A Reading A-Z Level R Leveled Reader

Word Count: 1,588



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LEVELED READER • R

Fishing in Simplicity



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Illustrated by Kevin McCarthy

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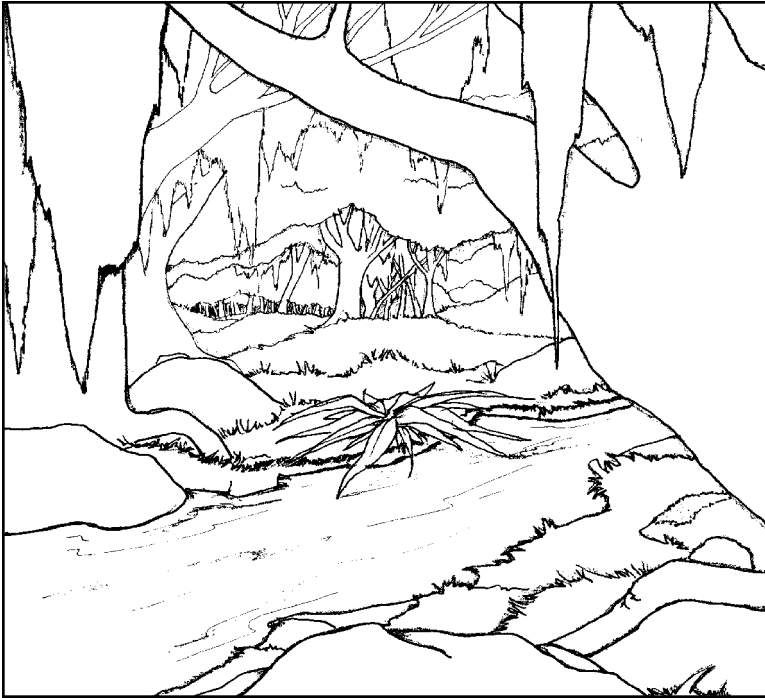
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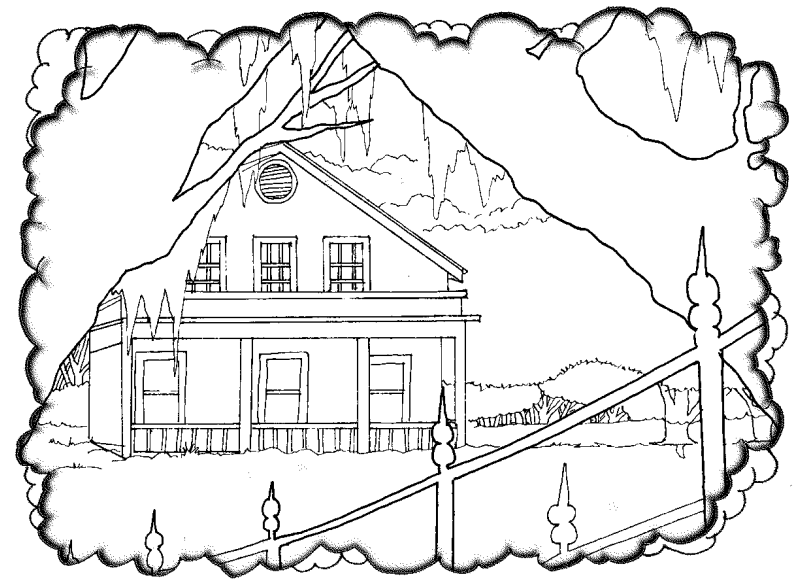
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Correlation

LEVEL R	
Fountas & Pinnell	O
Reading Recovery	22
DRA	34



I live in Louisiana, not far from Lake Charles. It's a backwater kind of place surrounded by bayou and meandering molasses streams, water barely moving at all. The streams know they're eventually going to end up lost in the ocean—a drop in the bucket, so to speak—and they're in no hurry to get there. This is as good a place as any to meander, “this” being my hometown—Simplicity, Louisiana. There isn't much to the town. I guess that's why the name fits so well.



It was on these Simplicity backwaters when I was eight years old that I made what I thought was the most historical of discoveries. Any one of a hundred lazy summer nights, my granddaddy would tell the story of an old house lost in the swamps where slaves used to hide out before the Civil War. The old house is gone, but his story has it that the place kind of lights up once in a while, all filled with ghosts and such. The only remnant of the house is a staircase that seems to go nowhere. That's why, I suppose, they call it Nowhere House.

That's why, when I found an old stone staircase that butted up against a sinkhole filled with water that fed Syrup Creek, I thought for sure I had found Nowhere House. My granddaddy just laughed and laughed. He said it was the old Deucane place that washed away in the flood of '63. There's nothing left except for thirteen steps up and a long drop to the water.



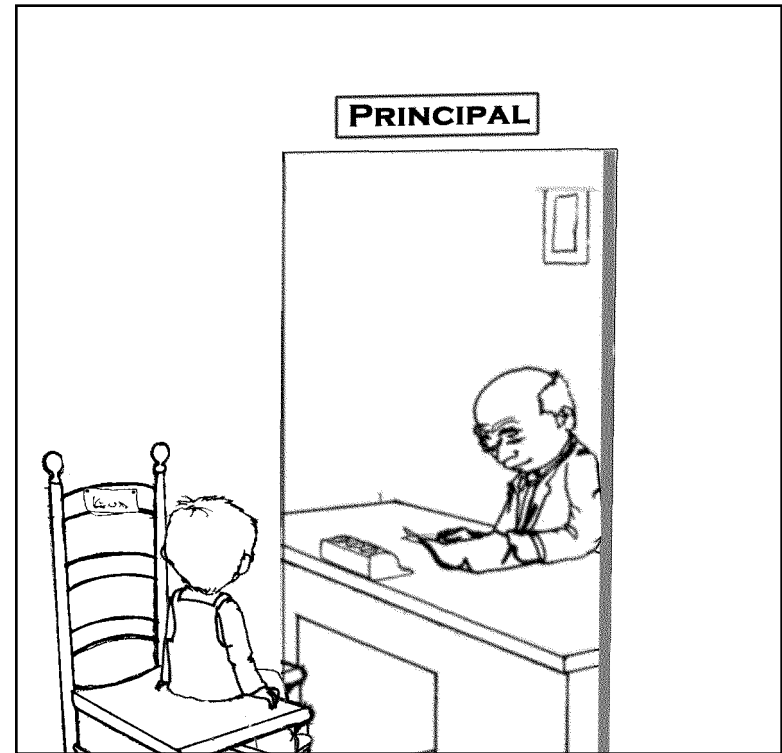
Fewer than a thousand people live in Simplicity, and most of them work for DeWilde's Feed and Seed or they don't work at all. DeWilde's does about everything: it's a flour mill where grain is ground, and they even have a shed out back where cayenne pepper is made into a hot sauce that would leave blisters on the sun. In front of the flour mill and lumberyard is the big store where you can buy anything and everything: a quart of fresh milk, barbecue sausages, persimmons, live crawdads, and even fishing tackle and lures.

It was the fishing tackle that drew me to DeWilde's. When I was nine, I didn't have two nickels to rub together, but that never stopped me from wishing up and down the fishing aisles.

Early spring of my tenth birthday, DeWilde's decorated the main window on the big front-porch side of the store with a fishing pole and all the rigging. It wasn't one of those long cane poles like my granddaddy used—it was a spinning reel with a pole made of fiberglass.



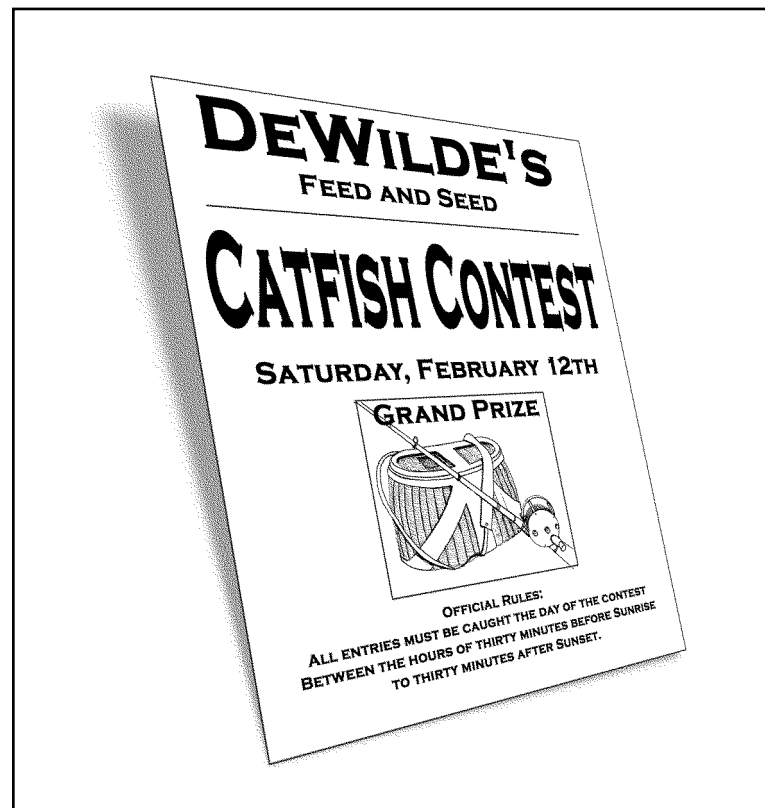
I wanted that pole in the worst of ways. Early in the morning before the sun heated everything beyond intolerable, I stood beside that window and stared. I don't know how many times I found myself standing there staring when I heard the school bell ring on the other side of town. I was late so many times that the principal, Mr. Dusard, taped a piece of paper with my name on it to the chair outside his office.

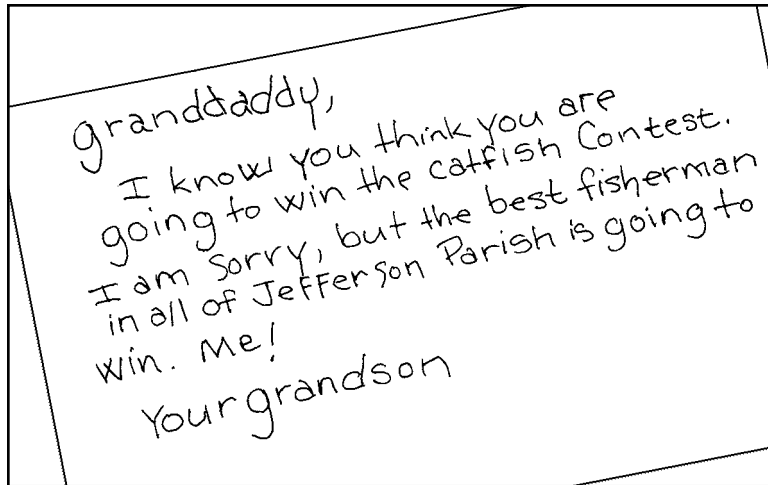




Now, I loved to fish—there was nothing better—but I didn't have a fancy rig. I only had a length of fishing line with a bobber and a barbless hook tied to the end. I always kept the line rolled up in my pocket because I just never knew when a fishing opportunity was going to happen.

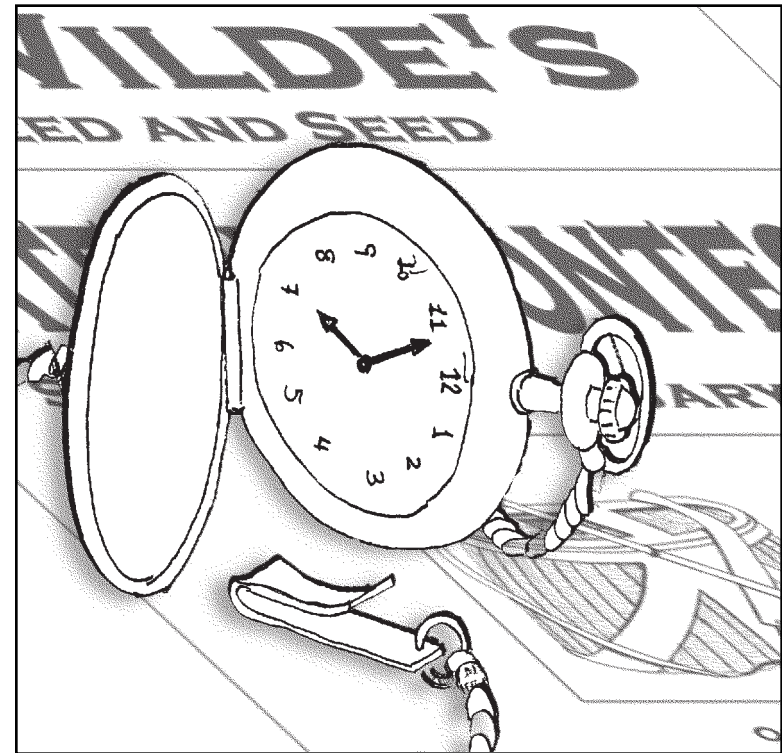
Sometimes opportunity *does* knock, and when it does, you'd better open the door fast before it runs away. On Wednesday, two weeks after Easter, there was a sign at DeWilde's. The sign told of a catfish-catching contest. Not a big deal in Simplicity—we have catfish-catching contests all the time. What made this special was the prize: the pole and reel in the window.





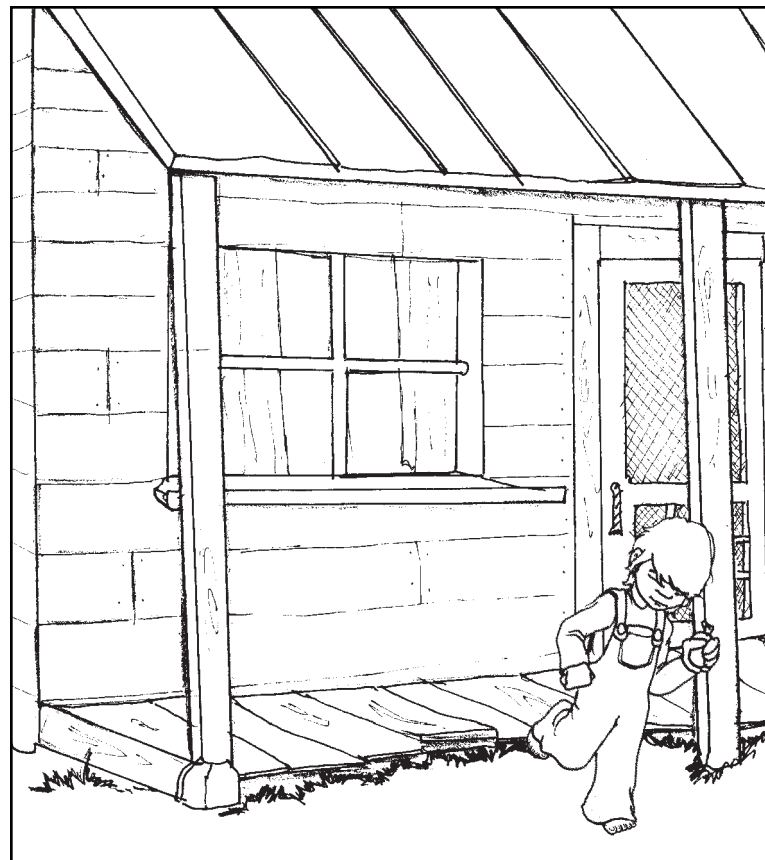
I may have only been ten years old, but I had a better feeling for catfish than any of the adults in town. Even my granddaddy said so, and that was hard for him because he was pretty good in his own right. He was enchanted by the competition himself. You see, he fished with a big old cane pole and a single line, and that fancy rig would do him real proud. It was my granddaddy who first taught me how to fish, but I kept on learning. That pole was going to be mine, and I told him so. So there ended up being a contest within the contest—me against my granddaddy. But my granddaddy never knew that I had a secret plan.

There were two basic rules: You could only catch one catfish fresh on the day of the contest, and there was a time limit. Since most folks who live here don't have a watch, the contest was ruled to be over half past dark, thirty minutes after sunset, no exceptions. In other words, if you were fishing and it got dark and all, you'd better hightail it to DeWilde's with whatever you had caught.





I got off to a really bad start. My granddaddy intentionally let me sleep in. He didn't try to wake me at all. He brewed himself a thermos of coffee and sneaked on down to the creek. I woke up sweating with the sun full on my face, a bad sign that it was ten o'clock or so. I should have given up on my secret plan then and there, but like my granddaddy, I'm not one to give up on much of anything. I pulled on some faded jeans, yanked on a T-shirt, and stuffed the rolled line into my pocket. I didn't wear shoes. It was hot, and I always thought shoes were bad luck anyway. I needed all the luck I could get now.



The slam of the screen door woke the neighbor's dog as I bolted from the house and trotted down Chigger Creek Lane. It wasn't much of a road, more of a dirt rut that wound through the swamp cedar and weeping magnolia. Along the way, I could hear granddaddy down at the creek laughing at me as I passed on by.

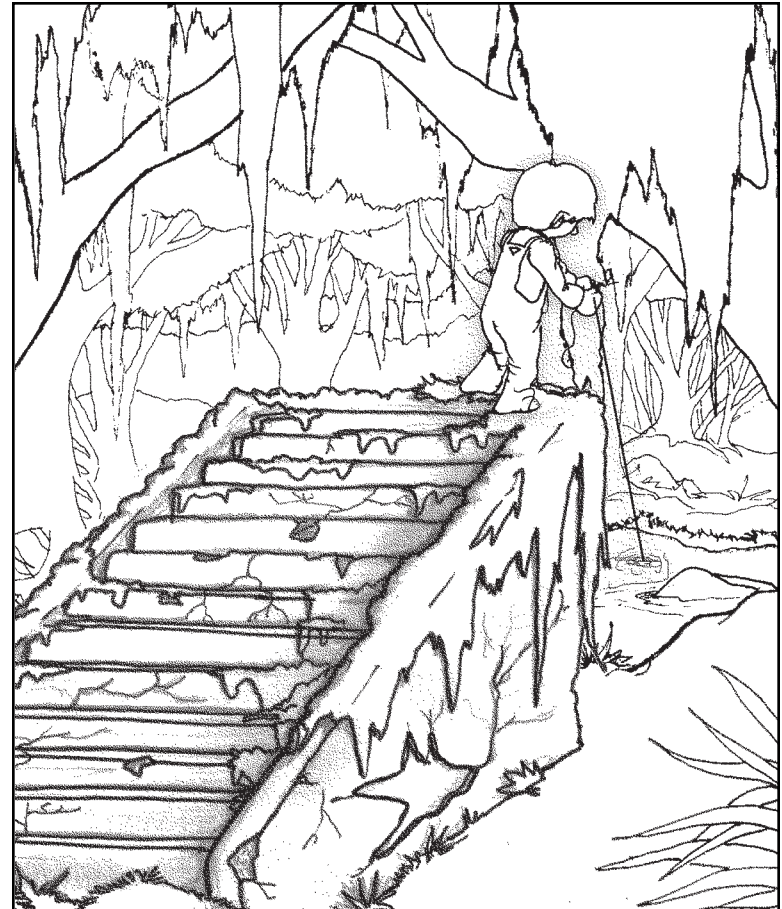
Though it was late, I stuck to my plan: fishing from the top step of the flooded Deucane place. I just had a feeling that there was a big cat there with my name on it, just like on my chair at the principal's office.



I climbed up the moss-covered stairs and pulled the line from my pocket. I sat down at the top, my legs dangling over, reflecting in the still waters of the sinkhole. I reached over and pulled back a slab of thick French moss. There, all white and juicy, were the biggest, plumpest grubs you ever saw. I skewered one onto my barbless hook and let it drop squiggling into the water. It sank from sight; the red and white bobber was the only sign that something was up.

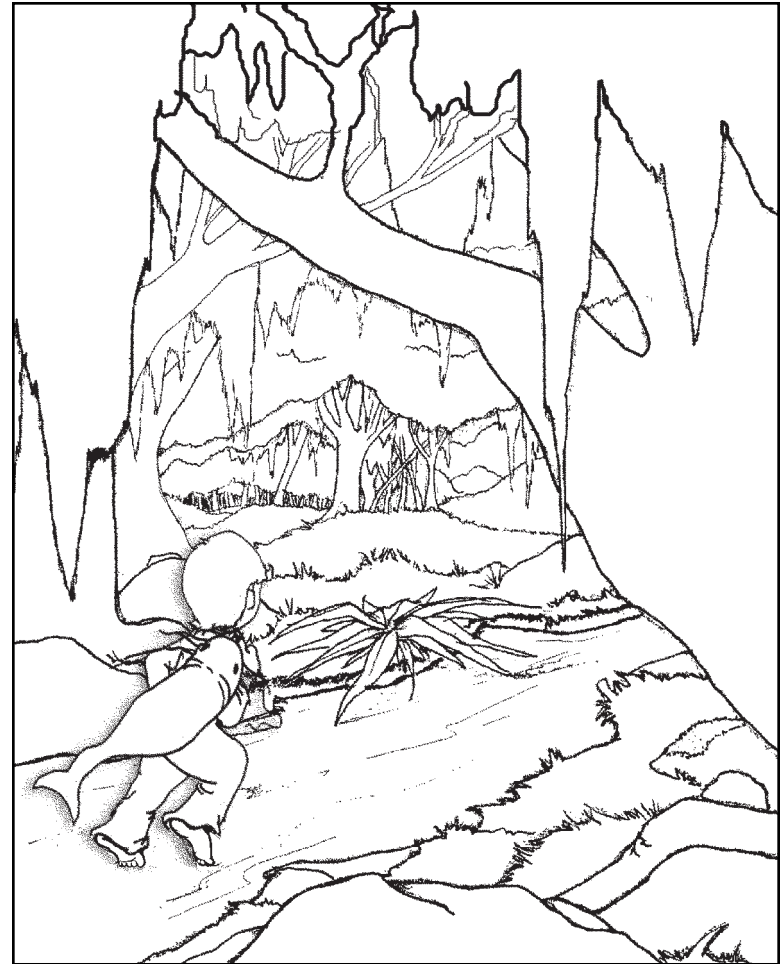
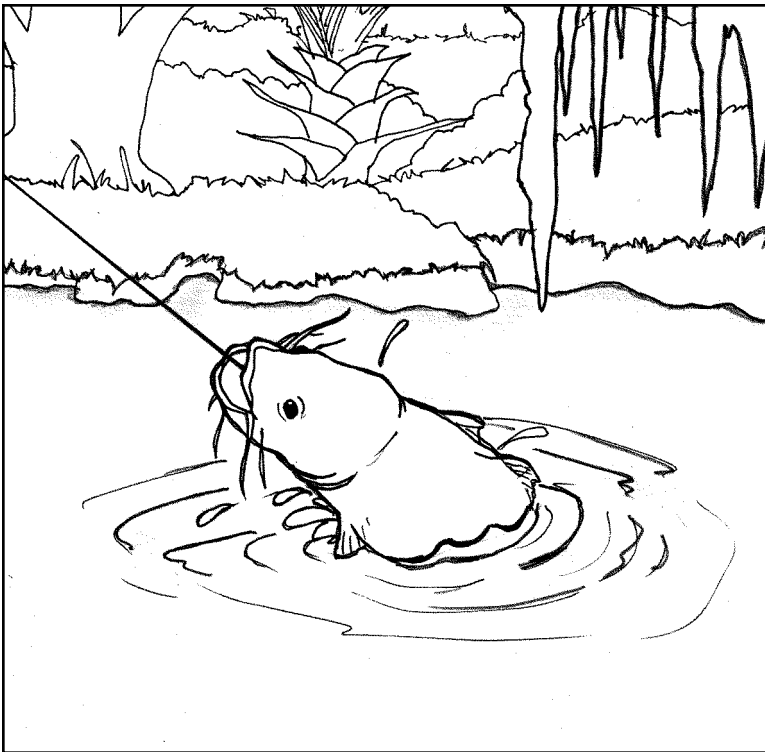
I kind of hunched my shoulders and waited because that is the best thing and the only thing you can do if you're going to catch contest-winning catfish.

The sun bore down, crisping my face, and in the distance I could hear my granddaddy bragging about how he'd already won and that I might as well give up.



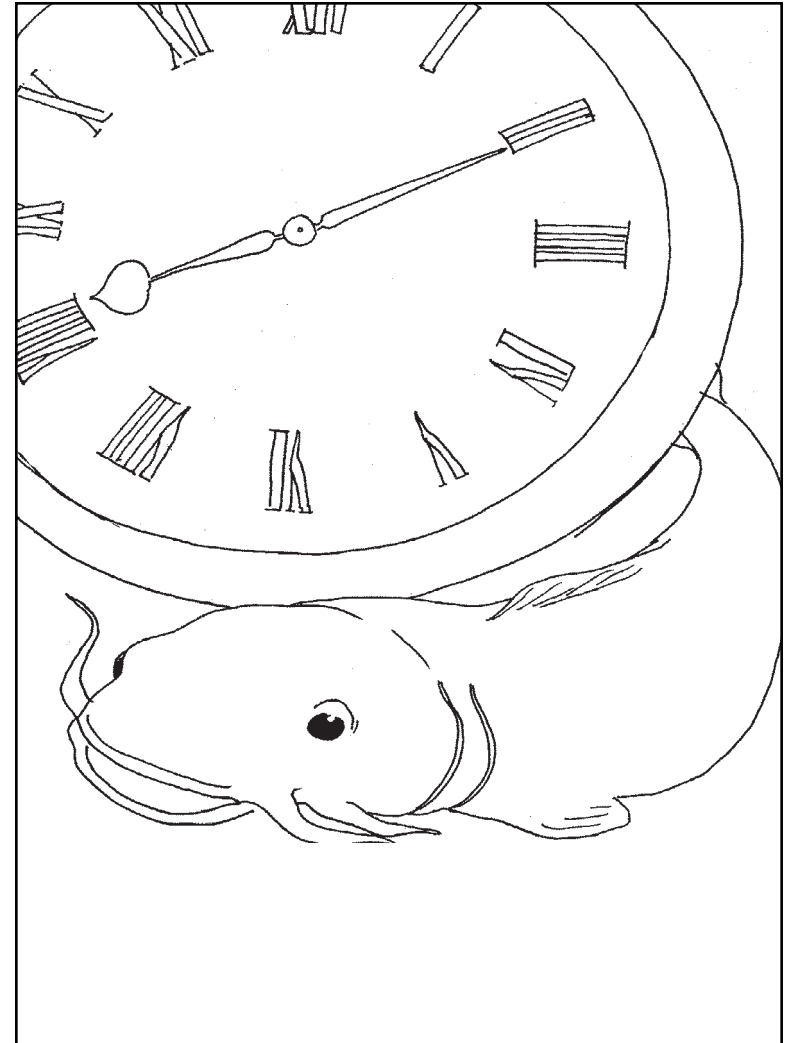
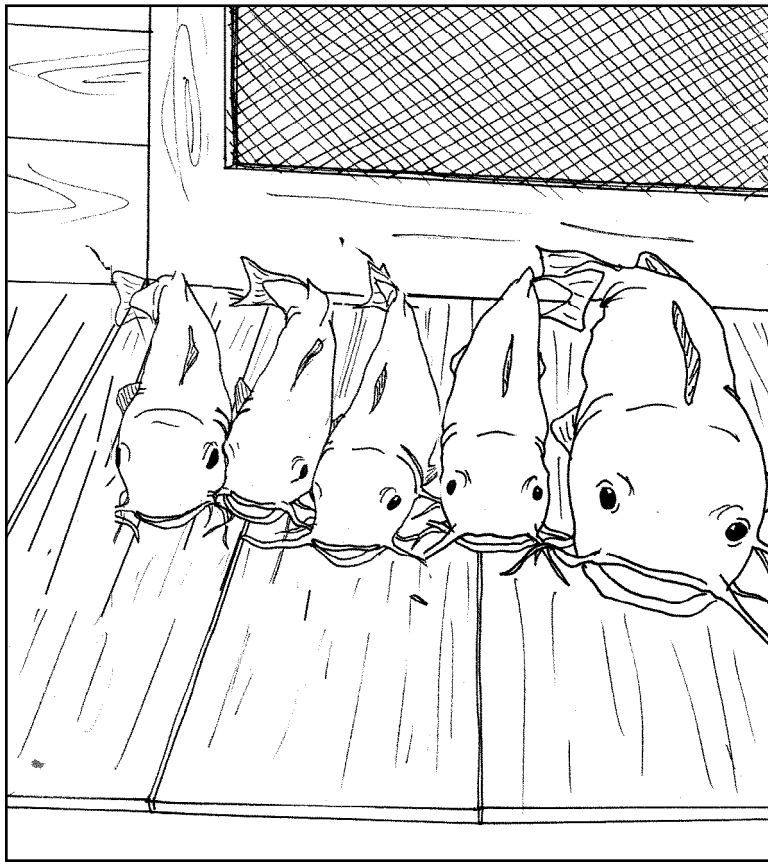
I never gave up. With the light slipping under the bracken and skipping off the black water, I changed bait for the eighth time without a nibble. Just as the sun dropped lower than my hopes, the bobber slowly slipped down in the water and disappeared deep. It was the hit I had been waiting for.

I let the line slip through my hands, patiently waiting to set the hook. When there was less than two feet of line left, I wrapped it around my right hand and hauled back hard. There was a return tug that nearly pulled me off the step, and then inch by inch I started reeling in that whale of a catfish. Old Moby was strong, and the skin on my hands was shredded like birthday ribbon where he pulled the line through my palms.



By the time I got that beast out of the water, it was dark and I could barely see it, but my arms and back could feel the mighty weight. It was the fishing pole for sure. It being dark and all, I had less than thirty minutes to get to DeWilde's.

With the prize heavy on my back, I ran. I slipped three times, fell twice, and finally ripped up the steps of the Feed and Seed. Inside was packed with town folk. I must have been a sight to see—hands bleeding, jeans torn from falling—but I was there. From the looks of things, my catfish, Old Moby, was the biggest fish caught.

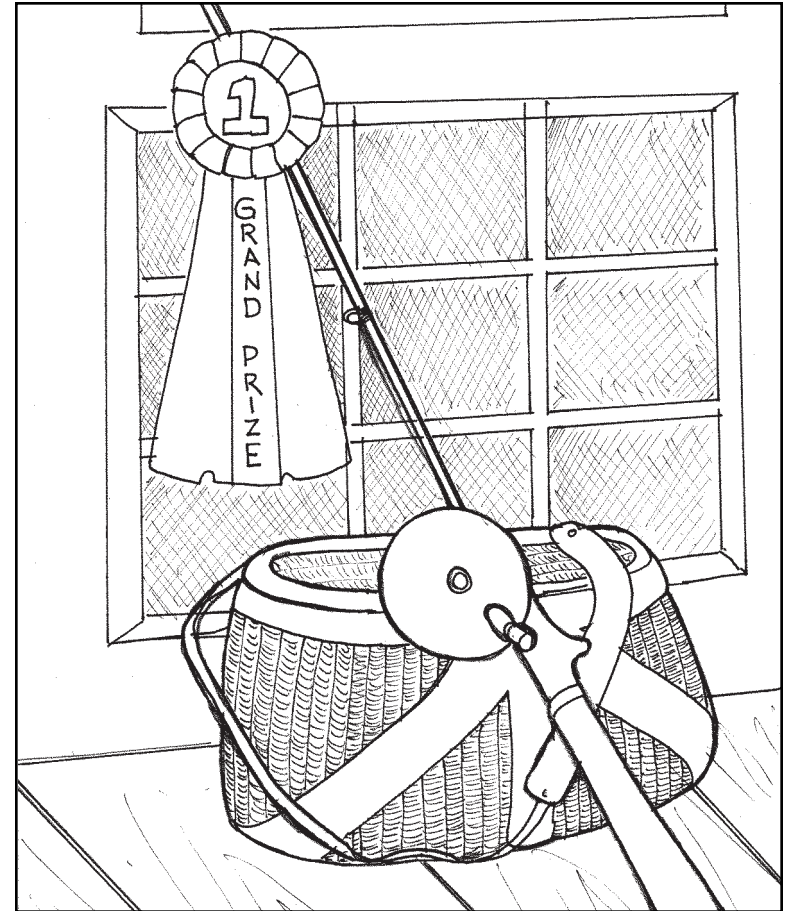
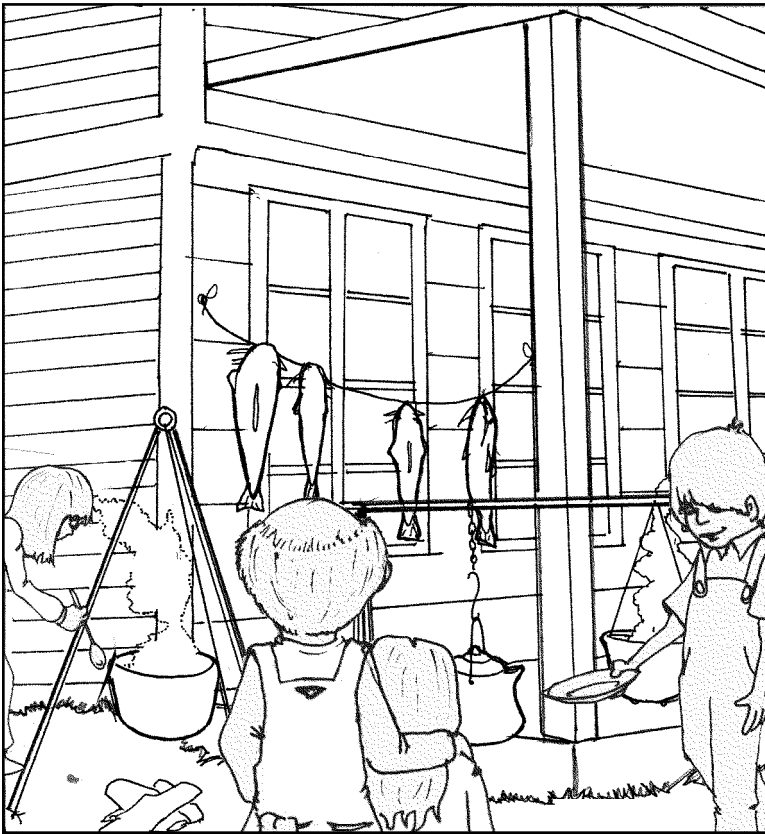


Later, there was no question that I had truly caught the biggest fish.

Later, there was no question that I truly was ten minutes late.

There was no question that my granddaddy won first prize with his puny little catfish that was half the size of Old Moby.

All in all, it still didn't end too badly. While the womenfolk cooked the catfish, men—grown men—gathered around me and bragged on my skill.



Kind of made me feel all grown up.

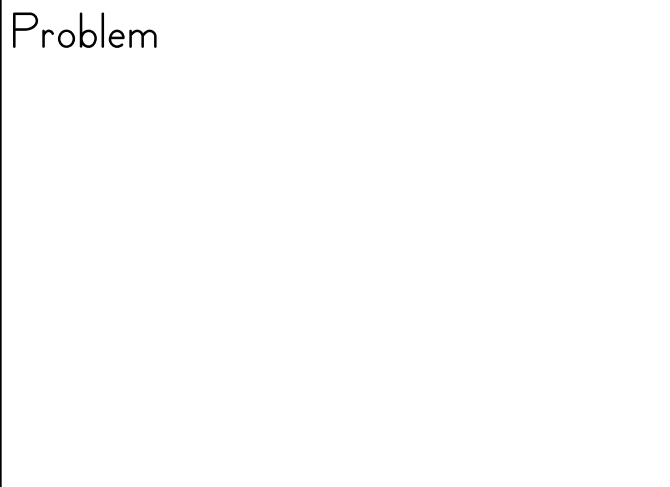
My granddaddy never found out that my secret plan was to give the pole to him anyway.

Things kind of always work out that way in Simplicity, my hometown.

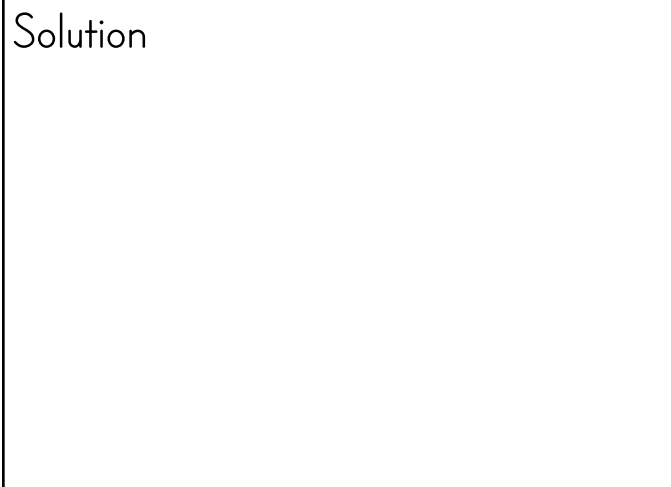
Name _____

INSTRUCTIONS: In the following boxes illustrate the problems and solutions that happened in the story.
Write a sentence to explain your illustration under each box.

Problem

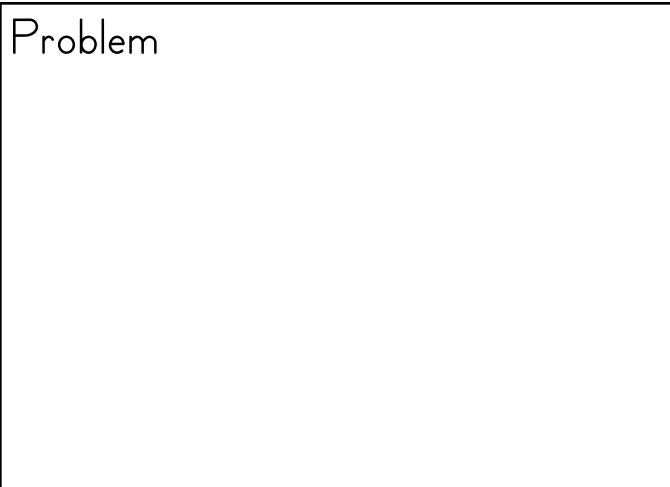


Solution

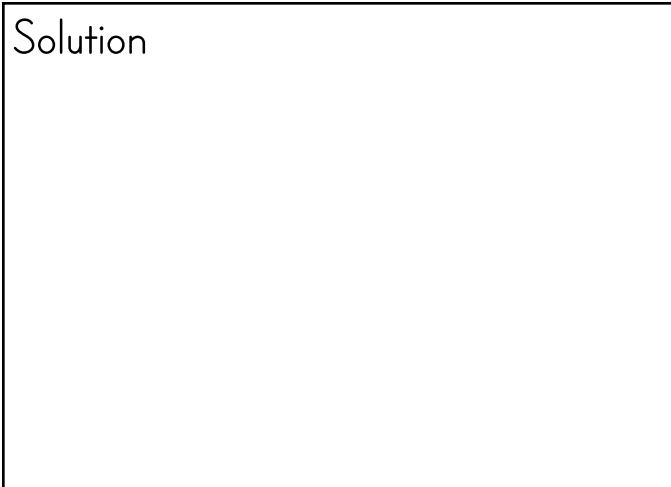


FISHING IN SIMPLICITY • LEVEL R • 1

Problem



Solution



SKILL: COMPREHENSION

Name _____

INSTRUCTIONS: In the top section, break the words into syllables. In the bottom section, rewrite the sentences using figurative language.

Simplicity

fishing

Louisiana

meandering

granddaddy

catfish

principle

competition

lumberyard

spinning

fiberglass

contest

intentionally

The river flowed out to sea.

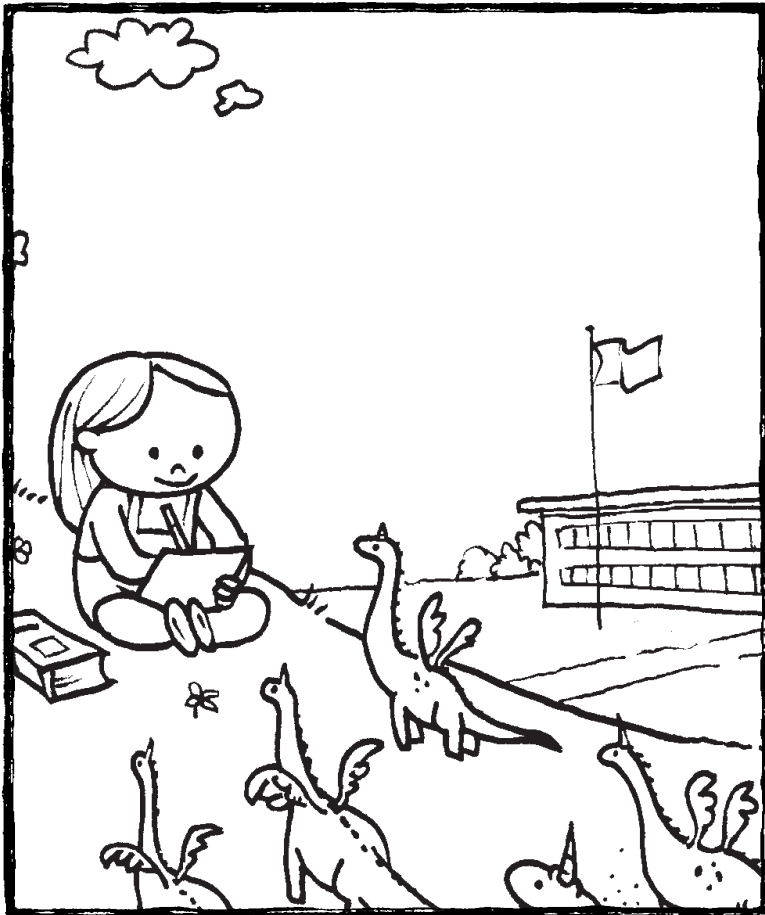
The catfish was big.

I was happy.

The Thesaurus

A Reading A-Z Level R Leveled Reader

Word Count: 1,421

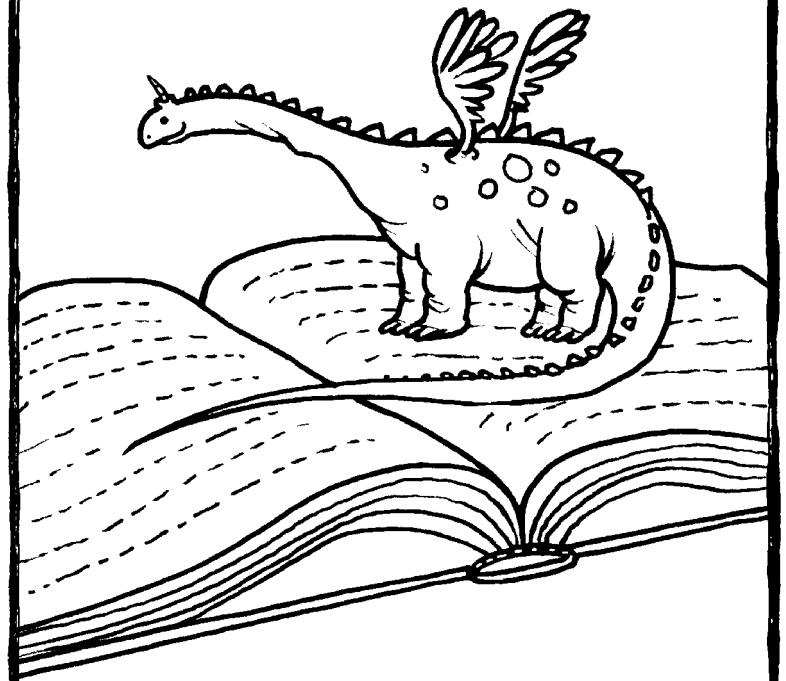


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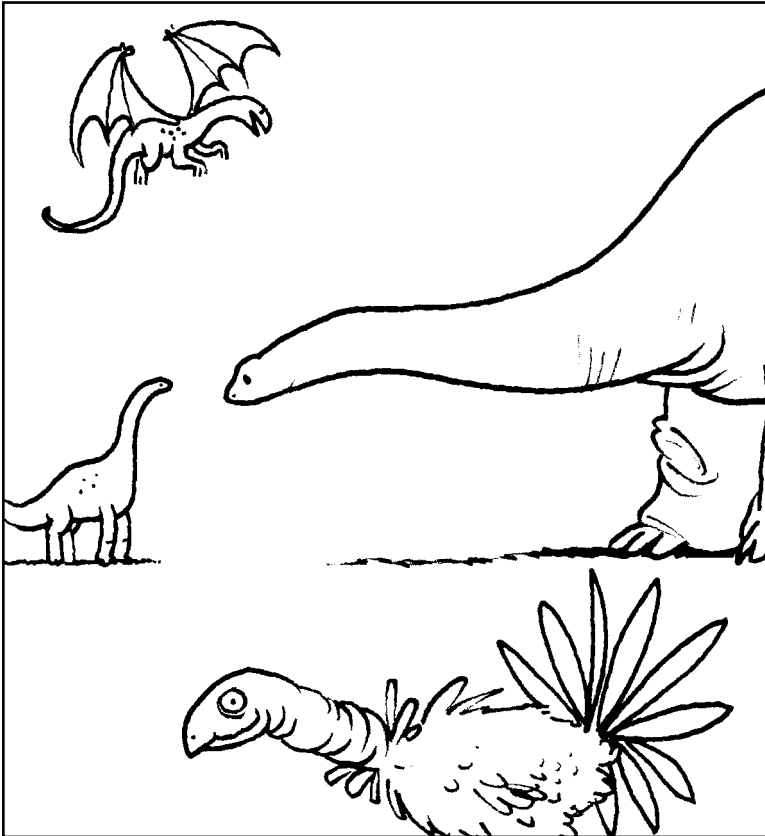
The Thesaurus



Written by Julie Harding
Illustrated by Chris Harding

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The Thesaurus



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The Thesaurus
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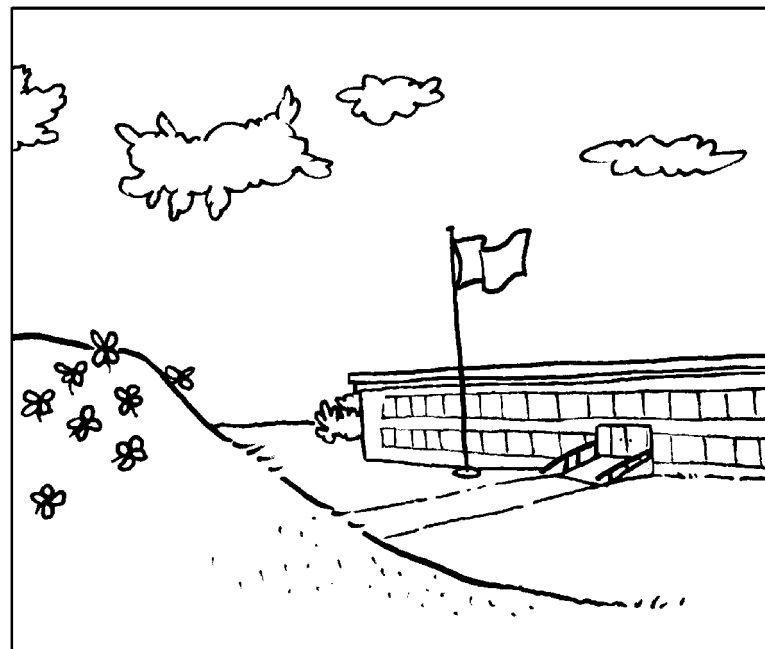
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Correlation

LEVEL R	
Fountas & Pinnell	O
Reading Recovery	22
DRA	34



Mrs. Ellis stood in her blue polka-dot skirt lecturing the class about antonyms. Antonyms and synonyms. How about M&Ms? Angie Jarrett thought and giggled inside. It was going to be a while before anyone could run out to the open field that surrounded Munger Elementary. Luckily, Angie sat pretty close to the window. She could almost feel the fresh air.



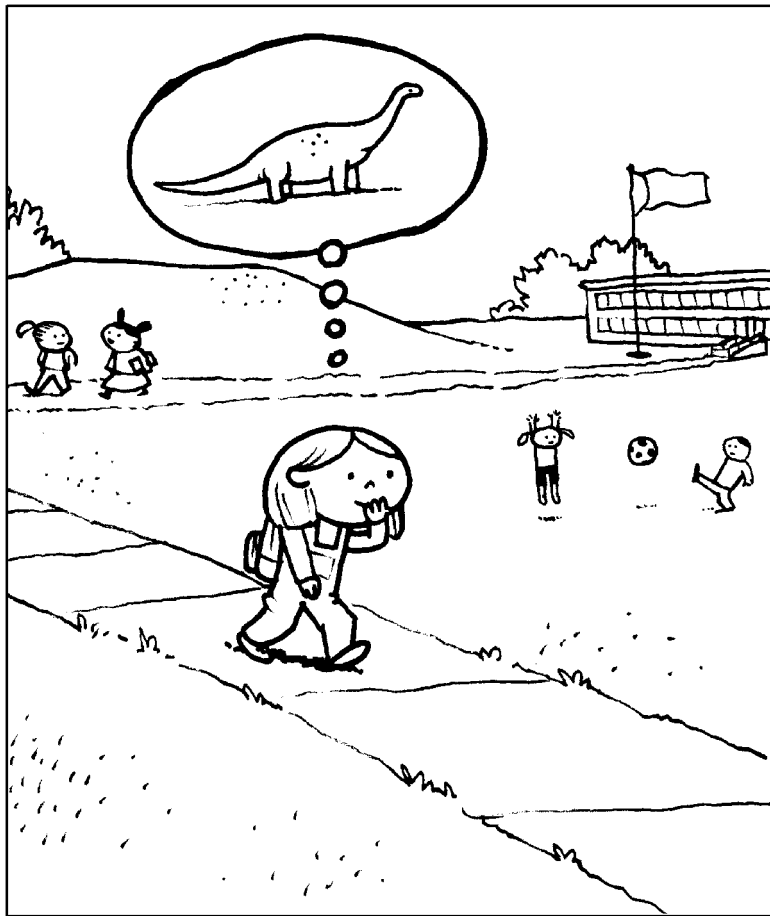
It looked like the day had warmed since lunch. Angie knew that the breeze would smell nice from the morning's rain. She also knew that this was the best time to dive into the clover patch on the other side of the playground's only hill. That was where Angie went when she wanted to write about things or just spend time with her imagination. Tiny gold-nosed puppies and great winged buffalo were known to play in the clouds above the hill. No one knew about their games except Angie.

She was watching the leaves on a tree just outside the window as they tickled each other in the breeze when Mrs. Ellis interrupted. “Angie, did you hear me? All of you need to bring a thesaurus to use in class on Friday. If you don’t have one at home, you can borrow one from me if you let me know before Thursday. You will each need one for the class. No exceptions, Ms. Jarrett.”

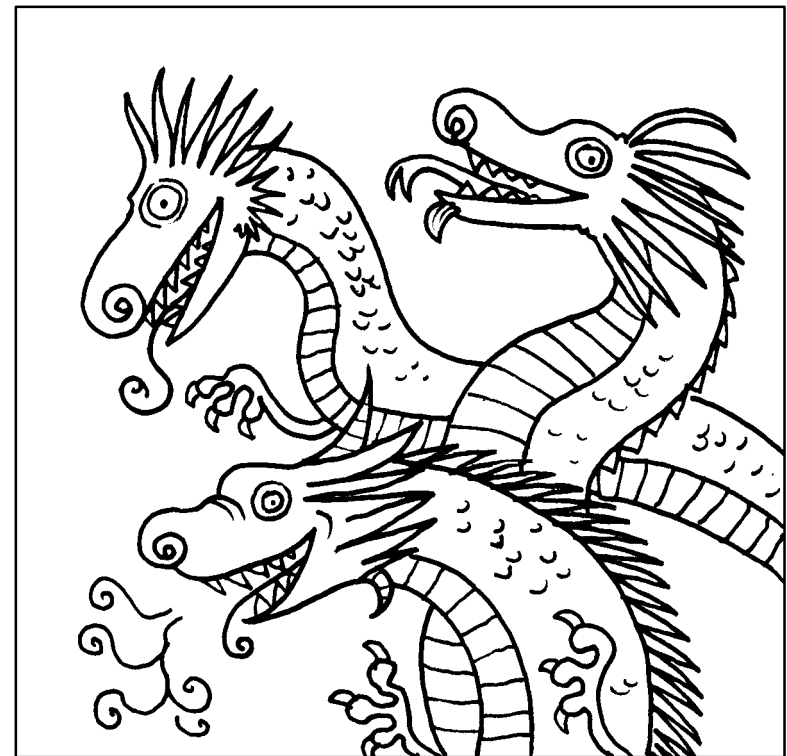


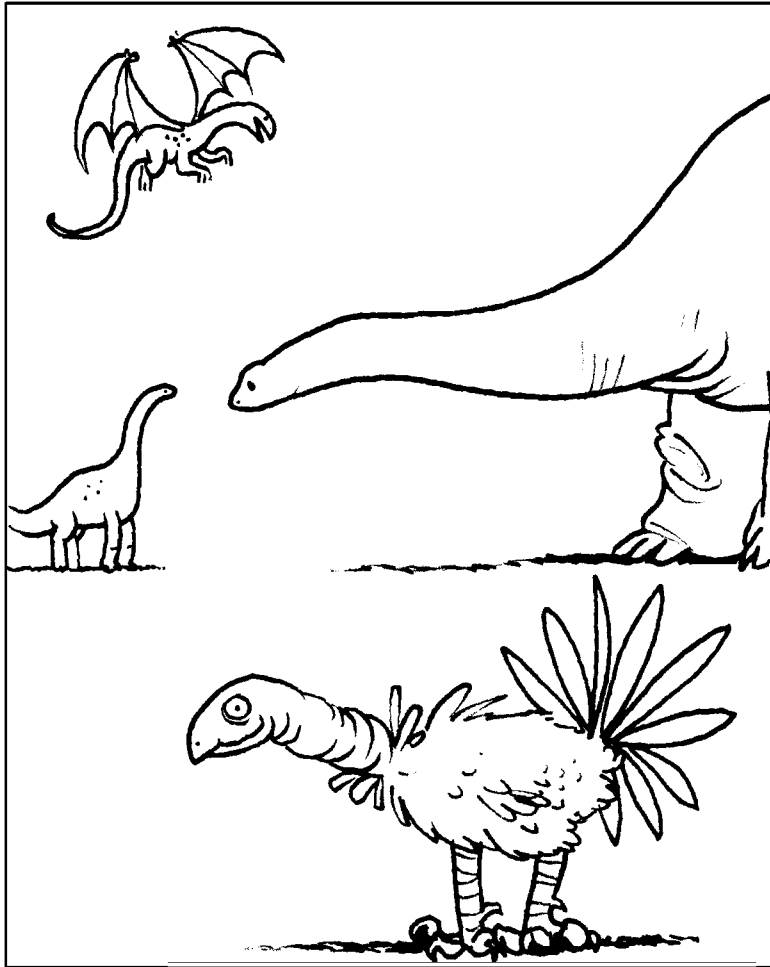
The bell rang before Angie could reply. She might have been about to defend herself, but instead, she was reeling with what Mrs. Ellis had just said. She’d been fascinated with the hulking creatures that had roamed the earth all those long years before. Her stomach began to tighten and excitedly she flew out the door, leaving her jacket behind to spend yet another night on the back of her yellow chair.

The day was indeed warm, but Angie would not have noticed if it had been below freezing. She was busy, trying to understand how she had missed the existence of a living, breathing dinosaur. Let alone one that, according to Mrs. Ellis, might be living in the homes of every student in the class.



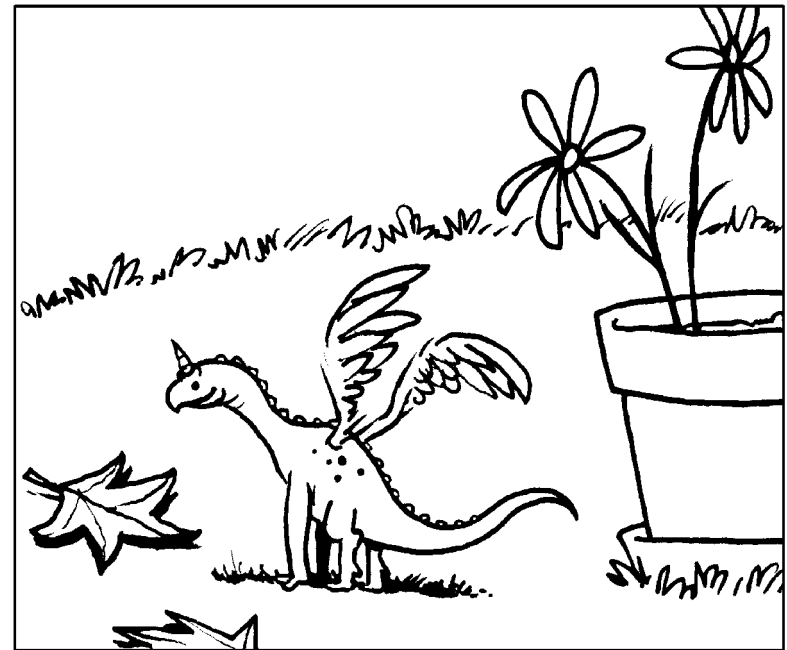
No one else seemed terribly surprised. Angie decided that it must be one of those things like snapdragons. Only yesterday, her best friend Gina had explained how snapdragons can talk and can grow in anyone's backyard. Apparently, they were a thing the Jarrett adults didn't think about much. They were fascinating creatures in Angie's opinion. Or maybe they didn't know about the thesaurus either.

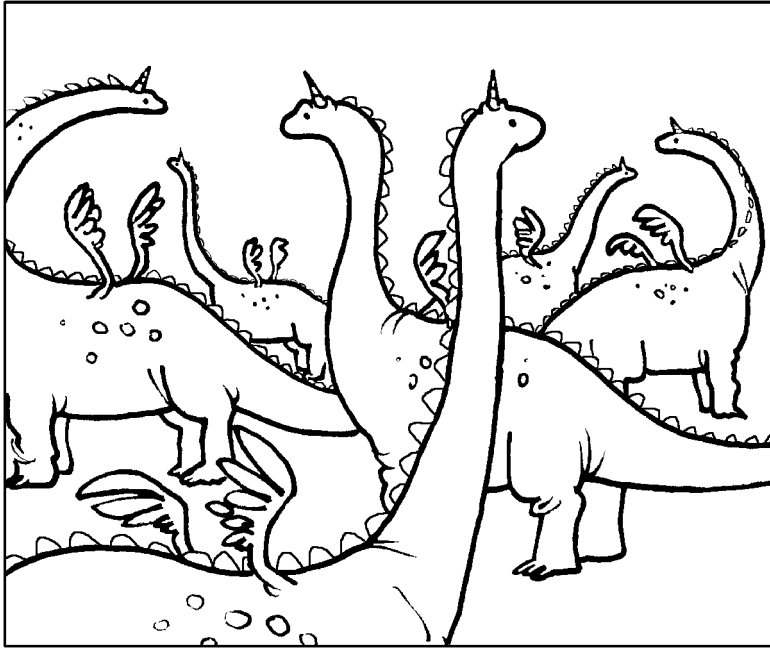




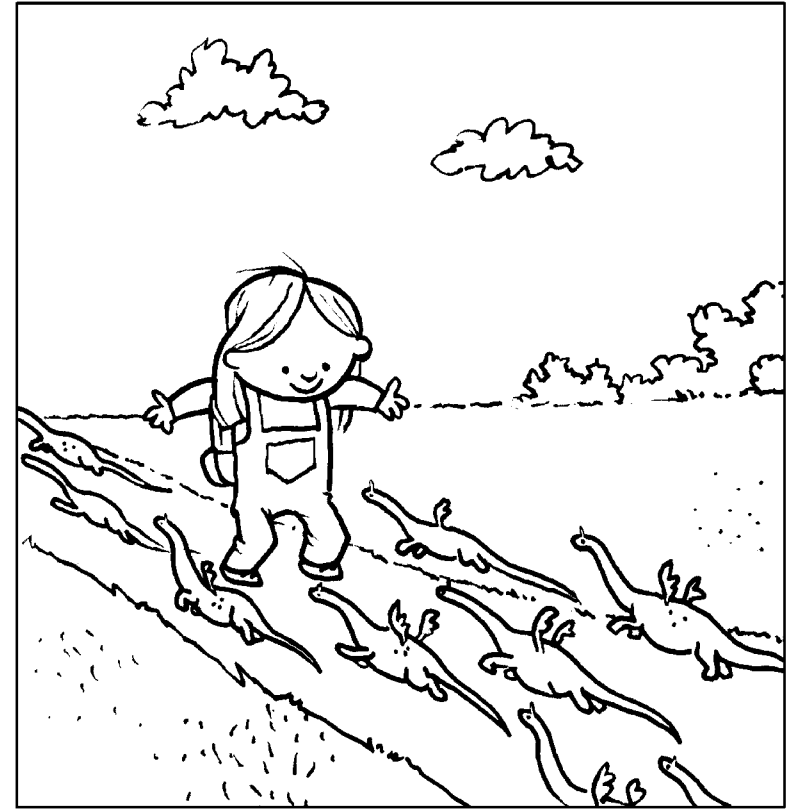
The questions began to form in her mind. How many wings does a thesaurus have? Is a thesaurus an herbivore? Are they tiny? Are they huge? Do they have feathers? Do they walk on two feet? There was much to be discovered.

Three blocks from home, Angie changed course. She headed for a wandering path that added an extra ten minutes to her walk. She needed time to wonder. What is a thesaurus like? If it lived at home, it had to be small. She hadn't seen one before, so they had to be at least as small as a parakeet. She hadn't noticed Gina's parakeet until the third sleepover at her house. Thesauruses were probably gray. Just like the dinosaurs in the program on PBS she had seen two weeks ago. This made it seem even more likely that the thesaurus could have wings.





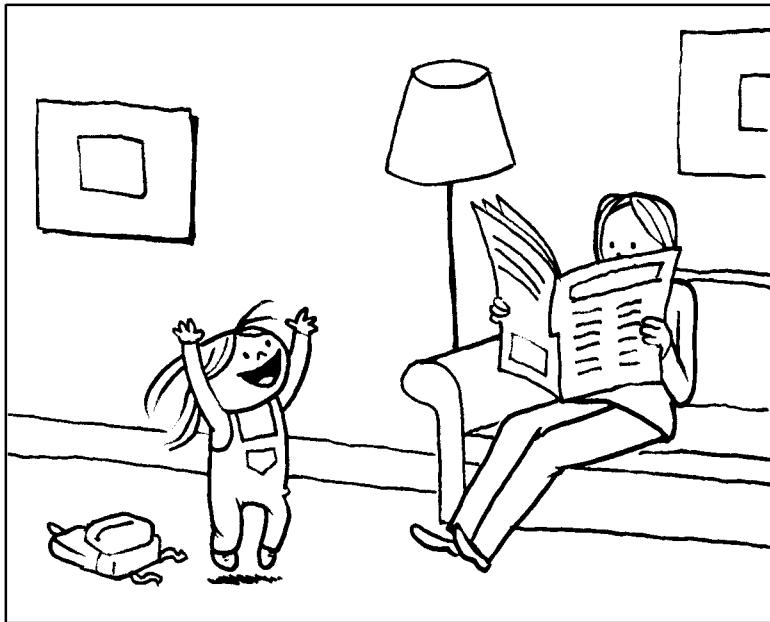
Maybe it was not so small. Any dinosaur that survived the ice age must be pretty amazing. Maybe it was a magical creature. No, that would be silly. Maybe it could camouflage itself, or shrink—the opposite of a blowfish. Perhaps they weren't as common as the teacher thought, and the class would all be asking for a loaner from Mrs. Ellis on Thursday. Angie hoped they weren't small. But in the end, she decided they must be. Twenty-five large thesauruses (or is it thesauri?) would never fit inside the classroom.



And so the daydream began. Suddenly, there were thesauruses all over the place. The grassy path was overrun with the stubby creatures. They were roaring their little roars, and changing color as they ran toward Angie. She stepped aside just as the charging thesauruses vanished into thin air. All the way home, there were incidents with the mischievous imaginary dinosaurs.

Angie was so excited when she got home that she forgot to close the door. Without looking up from the paper, her mother asked Angie to finish her grand entrance. Angie did so, and looked at her mother expectantly. She was determined to be patient.

After nearly five seconds of calm silence, Angie began in a breathless voice. “Mom! Listen! I don’t know if we have one, or even if you know about them, but I have to bring a dinosaur to class on Friday! Did you know they exist? Do we have one?”

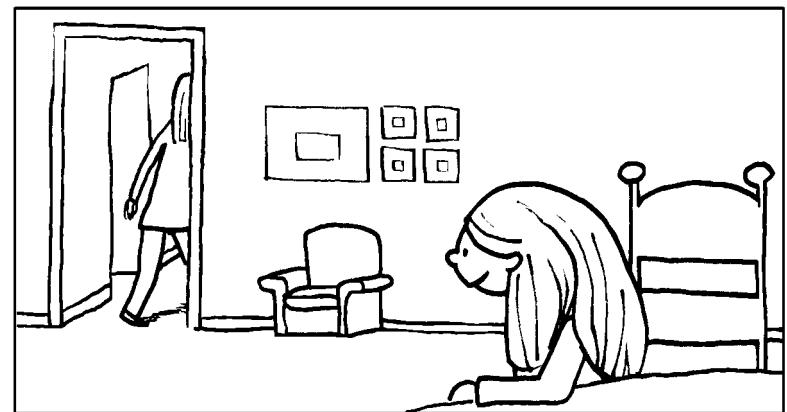


Angie’s mother lowered the paper and asked, “What do you mean? We have pictures of dinosaurs in the magazine on the coffee table.”

“No, mom, I have to bring in a real thesaurus.”

Her mother looked strange, like she might laugh. “Angie, I know that we have a thesaurus. I’m not sure you know what it’s for. Let me get it.”

The excitement was terrible. Angie’s mother disappeared into the den/library. Angie wondered if it had been there all along. Waiting between the shelves for her to play with it. Was it a boy or a girl?





Angie's mother emerged from the room and started down the hall. There was a book in her hand. Was it a care guide for pet dinosaurs?

"Honey," her mother began, "this is a thesaurus." She handed the book to Angie and tapped her elbow. "I know it isn't what you expected, but it really is a great thing to have."



"A book?" Angie groaned. "How could a book be named something as exciting as thesaurus?"

“It’s a wonderful sort of book, though,” said Angie’s mother. “It is a book that has many different words for the words we already know. Let me show you.”

She took the book and opened it to a random page. She pointed to the entry for nice. The entry listed the words likable, admirable, amiable, pleasing, courteous, kind, and even more.



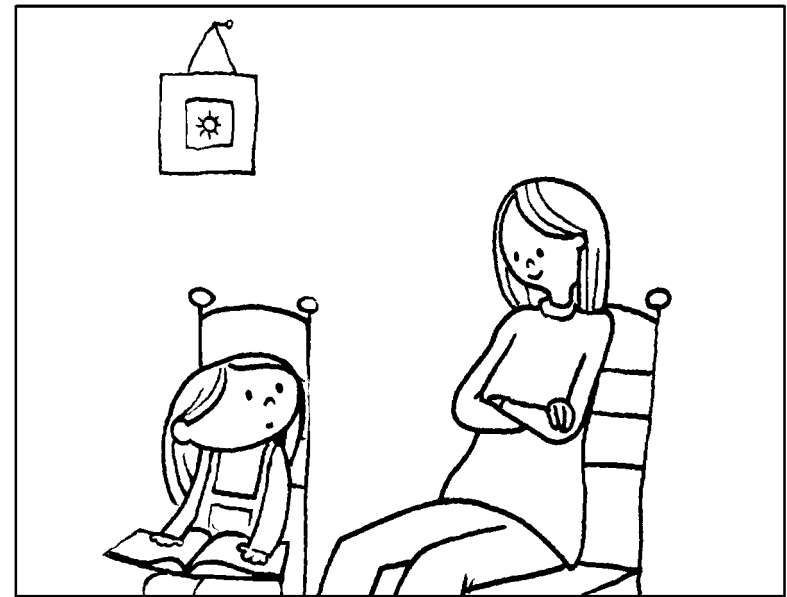
“You write stories—right, Angie?”

Angie looked from the corner of her eye at her mother. “Yes.” Her embarrassment was just beginning to fade.

“Do you ever have a hard time finding just the right word to write down?”

Angie nodded.

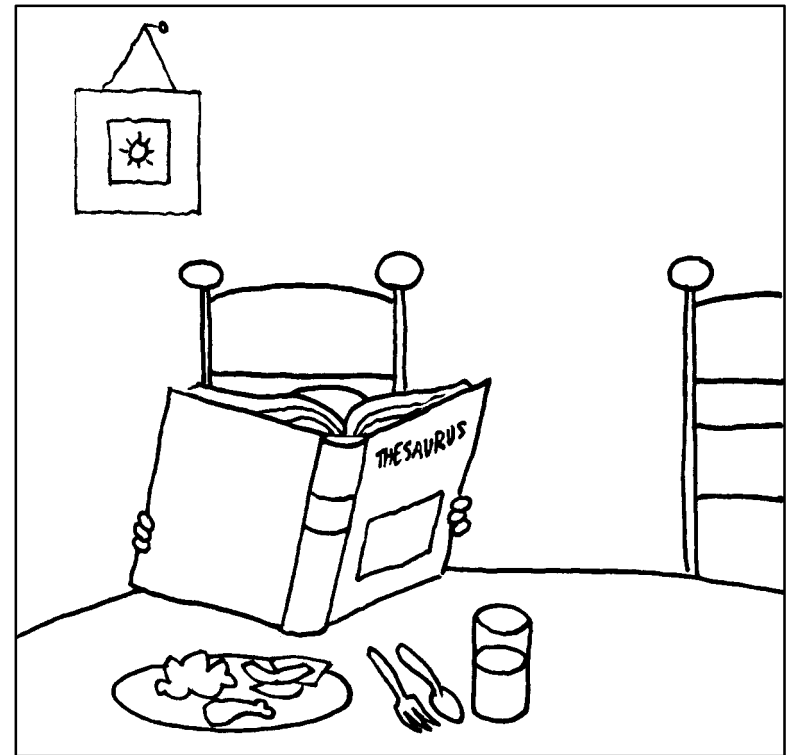
“This book, like the dictionary, is a tool for writers. Like a hammer to a carpenter or a tractor to a farmer. It’s pretty neat, when you think about it.”





But Angie wasn't thinking about it. She was busy watching her miniature Jurassic Park go extinct in the living room. Her mother gave her a belated welcome home hug, and headed into the kitchen. Angie stayed in the living room listening to cooking sounds. It seemed to be stir-fry. Angie's disappointment began to evaporate like her daydream and was carried out the kitchen window with the smell of bell peppers.

Angie looked over at the book beside her. She picked it up and found the word dream. There were at least fifteen words in the entry. All of them slightly different but somehow the same. She found words that led her to more words that led her to new words that sounded mysterious, incredible, and sometimes rather funny. When her mother called her to dinner, Angie forgot to put the book down before she began to eat.



Name _____

INSTRUCTIONS: In the end of the story, Angie has written her own story called "The Ponderous Brute."
Write your own version of her story, or write your own story using a thesaurus to find synonyms
for at least two words in your story.



Name _____

INSTRUCTIONS: Complex sentences are sentences that combine two sentences in one. Read each sentence and write the word *simple* if the sentence is simple, and *complex* if the sentence is complex. Write your own complex sentence at the bottom of the page.

1. Perhaps they weren't as common as the teacher thought, and the class would all be asking for a loaner from Mrs. Ellis on Thursday.

2. Angie looked over at the book beside her. _____

3. Luckily, Angie sat pretty close to the window. _____

4. I know it isn't what you'd expected, but it really is a great thing to have.

5. Angie knew that the breeze would smell nice from the morning's rain.

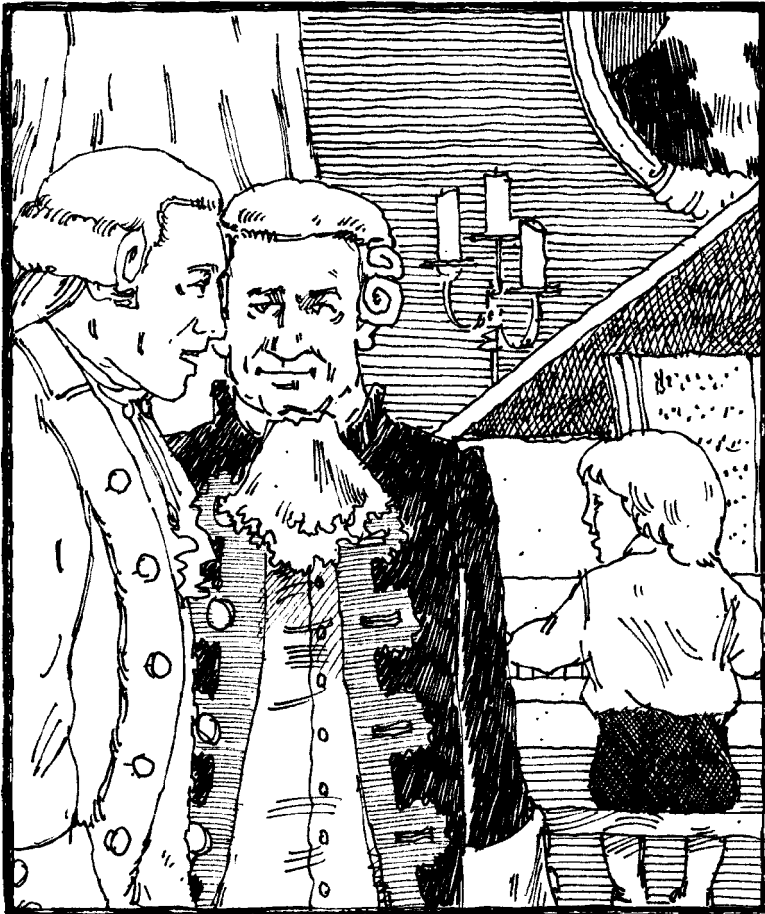
6. She hadn't seen one before, so they had to be at least as small as a parakeet.

My sentence:

Mozart

A Reading A-Z Level R Leveled Reader

Word Count: 1,529



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Mozart



Written by Bertha E. Bush
Illustrated by Stephen Marchesi

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The Toddler Pianist

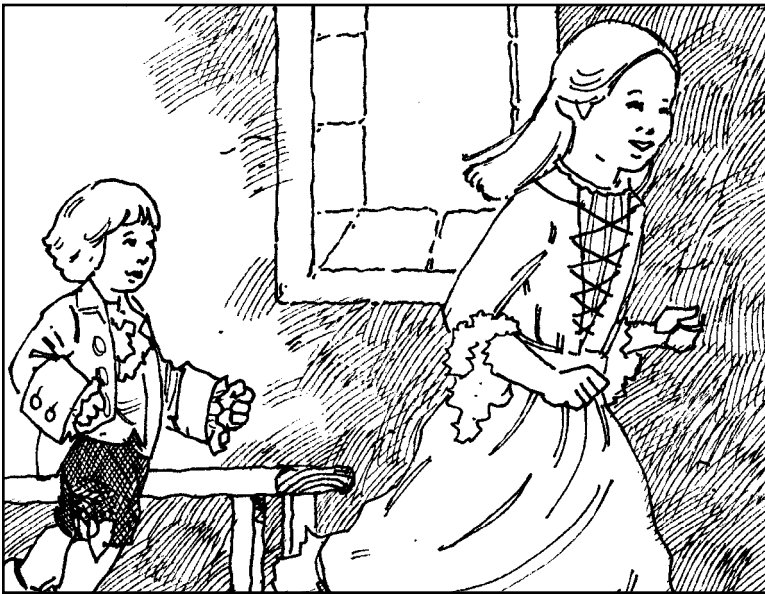
Leopold Mozart walked into the chapel in Salzburg, Austria followed by his two small children.

“I’d like to sign my daughter Nannerl up for music lessons. She is eight years old, and I already believe she has quite a talent for music,” he said to the **organist**. The organist, Anton, smirked a bit, for he knew how Leopold could boast about his children. “So, when will you be signing up the little boy?” Anton asked.

Leopold laughed at the joke, for little Wolfgang was only three years old. "Not for at least five years—I think eight is certainly young enough. Little Wolfgang's fingers would barely be able to stretch over the keys."

The organist promised to sign Nannerl up. Before Leopold left, the organist called Nannerl over to the church piano. "Come, I will give you a beginner lesson," he said. Nannerl ran over to her father, and Wolfgang toddled happily after her.

"Me too, Papa, me too!" he cried.

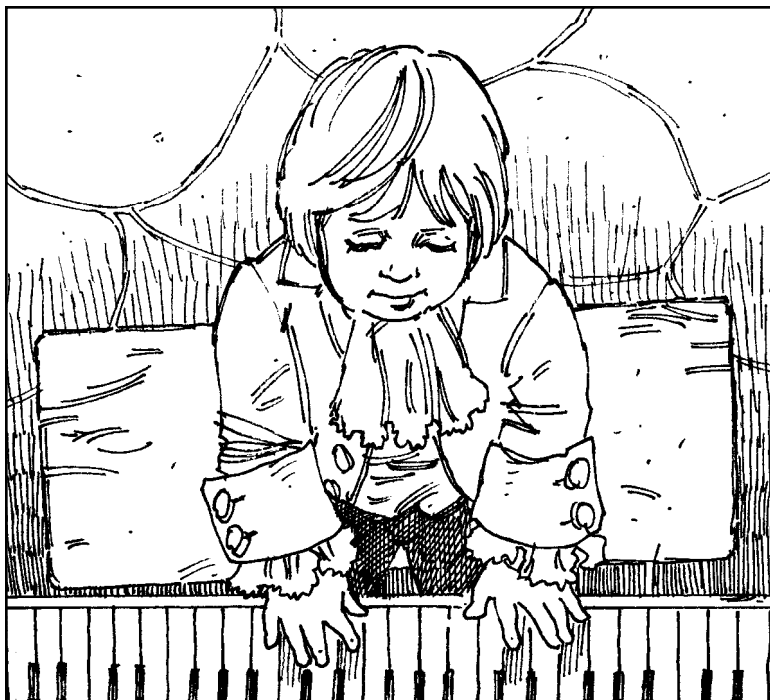


"No, no, Wolfgang, you are too small," said his father. "Pianos are not meant for little folks to touch, so please go outside and play."

Wolfgang turned around obediently. If his father had seen the disappointed look on little Wolfgang's face, it would have broken his heart. Wolfgang went outside and played near the door of the church, but his every thought was on the piano.

After Nannerl and Leopold had finished, they went to speak with the organist again. Wolfgang crept up to the piano and put his little hands on the keyboard. He began to play the simple **scales** he had heard his big sister practicing.





The sound entranced him, and he played the scales over and over, playing them exactly right. He forgot everything else—he did not notice his father and sister standing behind him. He didn't even hear his father shouting for the organist to come see. He was completely wrapped up in the music. He began changing the scales, even inventing simple tunes of his own. Leopold stared at his young son Wolfgang. The boy was a musical **prodigy**.



The Child Wonder

Mozart played music as naturally as he breathed. When he was four years old, it took him only half an hour to learn a difficult piece of music that was written down. If he heard the piece, even if he heard it only once, he could memorize it instantly. When Wolfgang was five, Leopold and a friend came in to find him bent over a piece of paper and writing big, black notes, smearing and splattering ink everywhere.

“Wolfgang, what are you doing spoiling the nice, clean paper?” his father asked.

"Papa, I'm writing a **concerto**," Mozart said, his little eyes shining. His father picked up the paper and laughed. But soon his amusement turned to amazement. It *was* a concerto, composed for several instruments. He could see that the notes were correct, despite the smears and blotches.

"But Wolfgang, this music would be too difficult for anyone to play," he said.

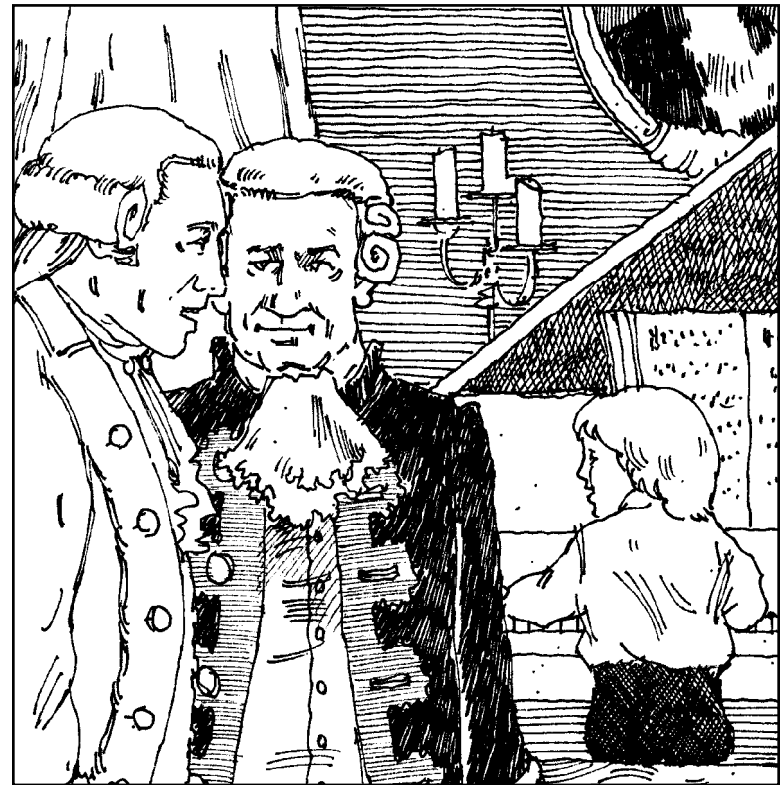
"Oh, no, it would only take some practice. See, it goes like this," said Wolfgang, and he ran to the piano. He placed his smudged paper on the music stand and began to play.



His father's friend had been laughing—he'd assumed Leopold was just playing along with Wolfgang. But now he saw that the child was a true wonder.

"You ought to travel with him," the friend suggested. "He should be playing for emperors, for kings and queens."

"Perhaps I will," said his father.





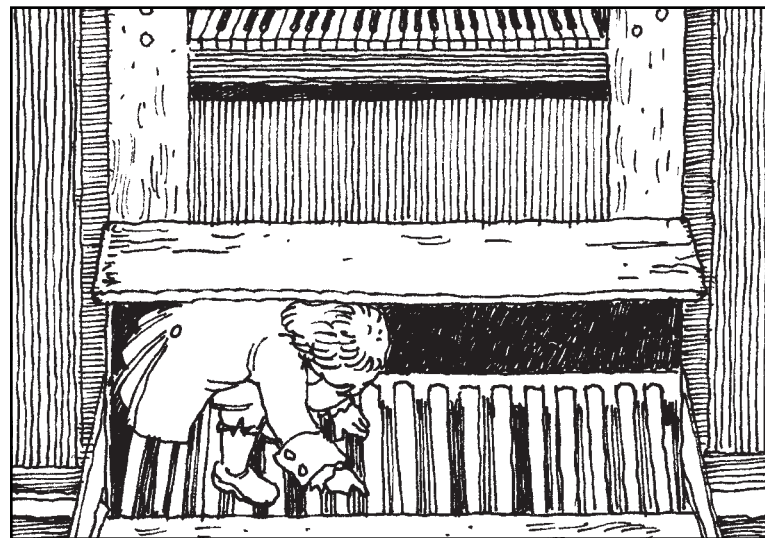
The following year, when Wolfgang was only six years old, he and Nannerl started on tour. Wherever Wolfgang went to play, people would giggle at him. He was so small compared to the big piano, and his feet couldn't even touch the floor. But when he began to play, the audiences fell silent. His playing was perfect and beautiful.

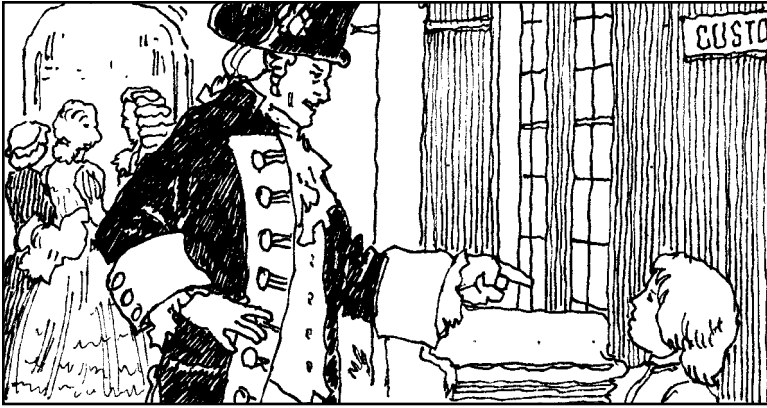
The first place they went to play was in Vienna, the capital of Austria. On the way, they stopped to visit a **monastery** in the little town of Ipo. There was a great pipe **organ** in the chapel.

"I want to play on it," Wolfgang said. "Papa, explain the pedals to me." Wolfgang's father helped his son onto the high stool. He was too small to even operate the pedals, so he walked across them instead. The music poured out of the chapel, growing more and more powerful. The monks, who had been at dinner, rushed into the room.

Because Wolfgang was so small, the monks could not see him, and they thought the organ was playing itself.

"It's an angel!" they cried. "Such music must come from heaven!"





Wolfgang was also very charming. Everywhere he went, people were **smitten** with this little musician. The customs officials asked him why he came to Vienna.

"I came to play the piano," he said.

"Why, you're no bigger than a chicken. You can't be old enough to play anything but a whistle."

"I'll show you," Wolfgang said. He asked the officials to open the box containing his piano, and the little boy began to play right in the customs house. A crowd gathered around in awe. The head of customs immediately gave the order to let the Mozart family through without difficulty.

After playing in Vienna, Wolfgang was invited to spend the day with the royal children. One of the princesses was the famous Marie Antoinette, who was just a little girl about Wolfgang's age.

Wolfgang liked her very much. She took him around the palace to show him all the wonderful riches. He was not used to such smoothly polished floors, and he slipped and fell. All the children laughed except Marie. After she helped him up, Wolfgang said, "When I am a man, I will marry you."

The princess's servant gasped. Then Wolfgang put his arms around Marie and gave her a big kiss. "**Dreadful!**" cried the servant, for it was never, ever allowed for a common person to touch royalty. But Marie only laughed, took Wolfgang's hand, and gave him a kiss back.





The Poor Young Man

Wolfgang, his father, and his sister toured all around Europe. Wolfgang's fame grew, and he became a very handsome young man. But unfortunately, the life of a musician did not pay well. People were less impressed with his playing as he got older. After all, a six-year-old musician was a marvel, but a twenty-year-old musician was nothing new.

For his entire adult life, Wolfgang Mozart was very poor. Once, a friend came to visit him and found Wolfgang and his young wife waltzing around their apartment. They were not dancing for joy; they were dancing to try and keep warm, because they could not afford fuel.

Wolfgang's wife, Constance, was often ill. They also had little children to take care of. Everyone agreed that his music was wonderful, but writing, selling, and playing music did not bring in much money.





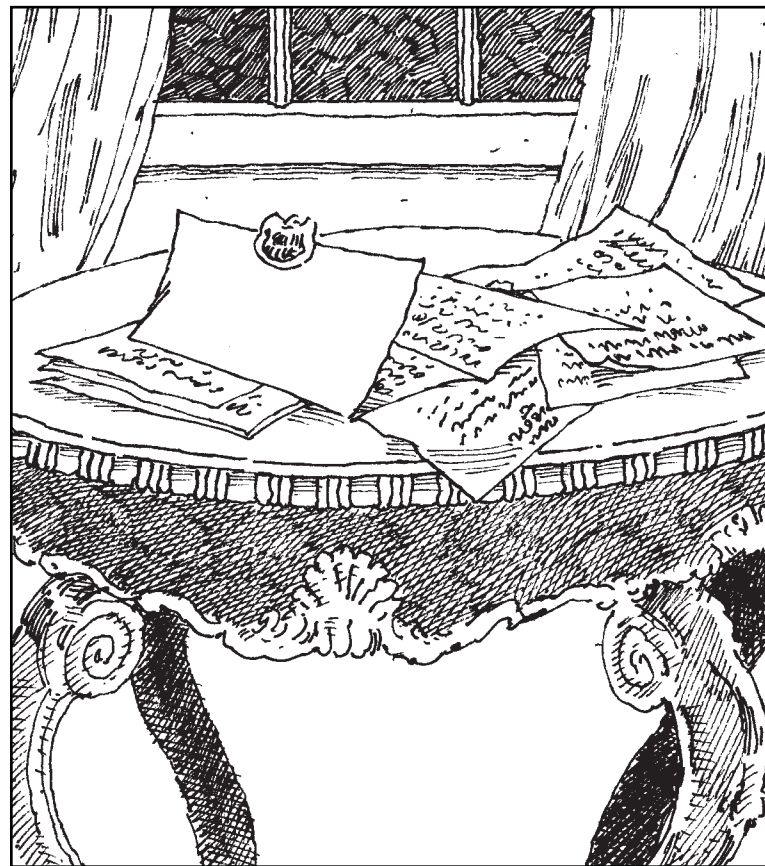
The Requiem

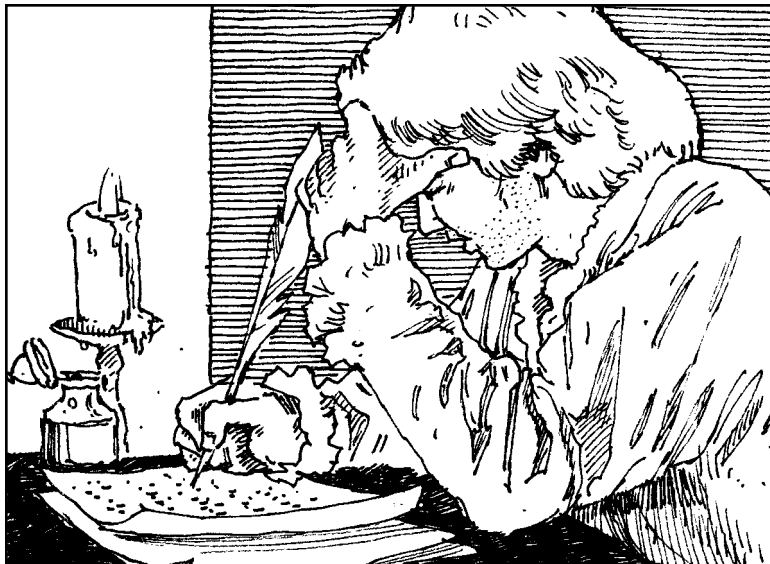
One day when Mozart was thirty-six, a tall stranger dressed in gray pounded on his door. Without saying a word, he handed Mozart an envelope. Inside was some money and an order for Mozart to write a **requiem**. Nothing in the envelope said whom it was for.

"It is for myself," Mozart said to Constance. "I feel it in my heart."

She laughed. He was only thirty-six, and it was silly for him to talk of dying!

The truth was that the requiem had been ordered by a count. He wanted to play the music at his wife's funeral, but he wanted to say that he had written it himself. But Mozart didn't know this.





Wolfgang began writing. He wrote feverishly, staying up all night, sometimes even forgetting to eat. The work exhausted him, and he began to grow weak. Mozart had been making a little money by teaching music students. But now he was so wrapped up in the requiem that he cancelled all of his classes.

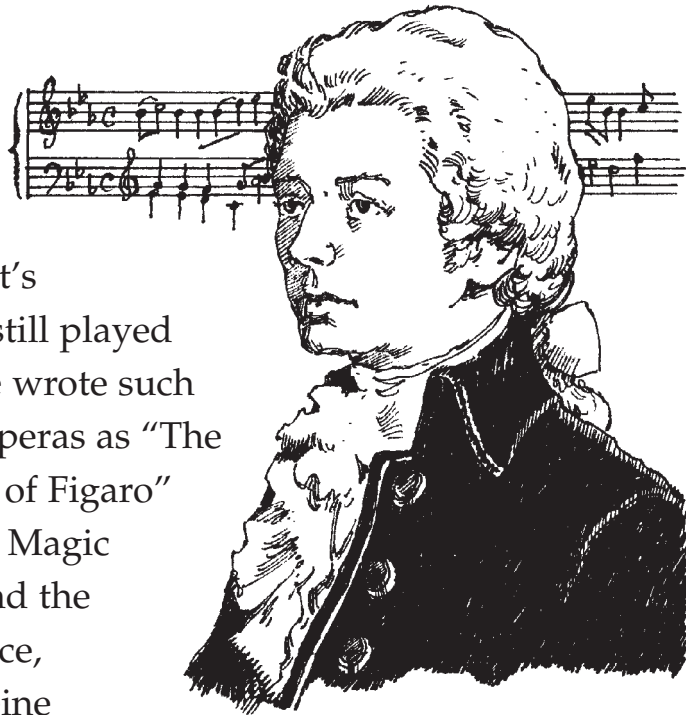
Without money, the family couldn't afford much food. They couldn't afford candles to light their cold house at night. But still Mozart wrote, growing weaker and weaker. Finally, just before finishing the requiem, Mozart died. It truly had been his own requiem.

The Greatest Musician Who Ever Lived

Mozart is still considered the greatest musician who ever lived. But when he died, his family was so poor they could not purchase a gravestone. Eventually, no one could remember where he had been buried. Today there is a great monument to Mozart in Vienna, and on it is an inscription reading, "The **probable** site of his grave."



The monument to Mozart in Vienna where he probably is buried



Mozart's music is still played today. He wrote such famous operas as "The Marriage of Figaro" and "The Magic Flute," and the piano piece, "Eine Kleine Nachtmusik" (which means "a little night music" in German). You may not have heard of these pieces of music, but if you heard them being played, you might recognize them. Mozart's music is used everywhere. You can hear it in a concert hall, or you can hear it in cartoons. He wrote many of his most famous pieces when he was only a little older than you are. And he died while he was still young. Imagine the wealth of music we might have if he had only lived.

Glossary

concerto	a piece of classical music written for an orchestra, with solos by one or more instruments (p. 9)
dreadful	terrible; awful (p. 14)
monastery	a group of buildings where monks live and worship (p. 11)
organ	a musical instrument with keys like a piano and large foot pedals (p. 11)
organist	a musician who plays the organ (p. 4)
probable	likely but not sure; possible (p. 20)
prodigy	a child who is very skilled at something, often more skilled than most adults (p. 7)
requiem	a piece of classical music written specifically for a funeral or death (p. 17)
scales	a series of notes covering every note in one key (p. 6)
smitten	in love with; adoring (p. 13)

Name _____

INSTRUCTIONS: Read the sentences and then write the conclusions you can draw.

It was starting to rain, but Jon wasn't going to stop. He had promised his mother that he would get all the leaves raked before she came home from the store. He worked as fast as he could, and soon he had the job done.

What conclusions can you draw about Jon?

Which words gave you clues?

The noise never seemed to stop. Traffic rushed by at a fast pace, never pausing. People walked along the sidewalks, calling out to friends and neighbors. You could get something to eat at all hours of the day and night.

What conclusions can you draw about this place?

Which words gave you clues?

Tammy stood looking out at the rain. She had been waiting all week to beat her biggest rival, but now she would have to wait even longer. She shuffled over to the coach and plunked herself down with a heavy sigh.

What conclusions can you draw about the way Tammy feels?

Which words gave you clues?

Finally, what conclusions can you draw about Mozart?

Name _____

INSTRUCTIONS: Use the following words in sentences. Write one sentence using the comparative form and one sentence using the superlative form of each adjective.

1. fast

2. lucky

3. amazing

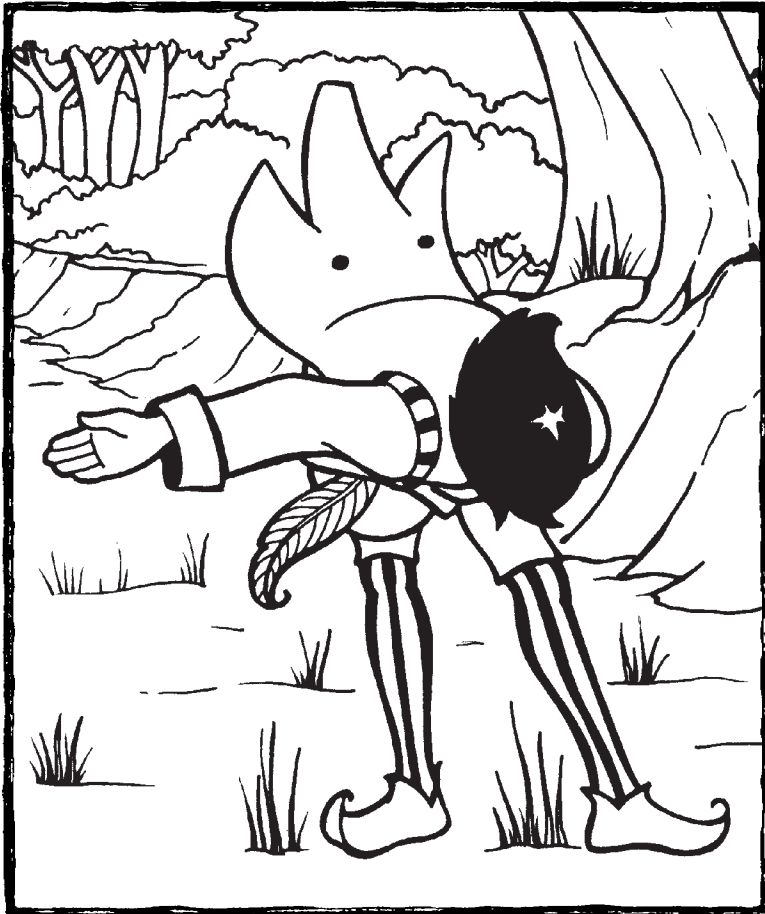
4. happy

5. bad

Murdoch's Path

A Reading A-Z Level R Leveled Reader

Word Count: 1,580




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Murdoch's Path



A Story of Ireland by Juliana Horatia Ewing
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Chapter 1

Pat was a poor delivery boy, and all the townsfolk loved him. He was as **trustworthy** as a clock and always delivered goods and payment on time. And he always returned any change. He had as much work as he could handle. If it only paid well, he would have been a rich man. But Pat was so poor that when he walked on the highway, he kept his shoes in his pockets until he got to town. That way, the shoes would not wear out.

One night, his deliveries had kept him so late that he rushed down the dark road, his shoes still on his feet. This is what he was saying to himself:

“A dozen balls of gray yarn for Mistress Murphy. Three dozen bright buttons for the tailor. Half an ounce of throat drops for Father Andrew.” These were the items he had been sent to **fetch**. He repeated them so he would be sure to remember them.



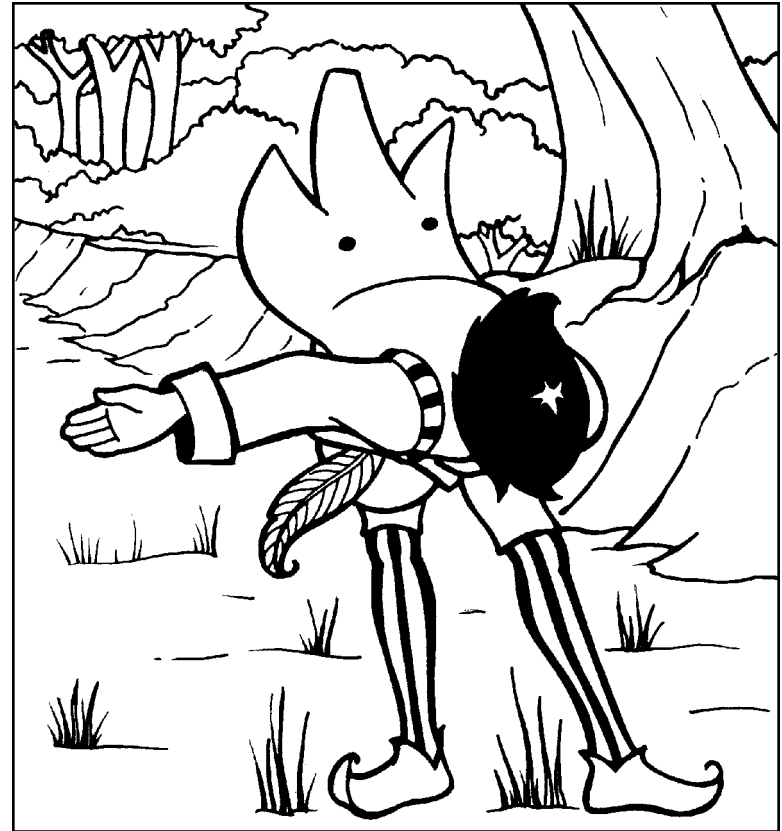
Now, everyone knew that there were two ways home from town. One was the proper highway, and the other was Murdoch's Path. The Path was nothing more than a wet, swampy, **brambly**, overgrown ditch. No one dared go there because it was **infested** with fairies. In all the years Pat had gone to and from town, he had always taken the highway. But poor Pat was so late and so deep in thought that when he came to the fork where the Path split off, he didn't even look up. He marched right down Murdoch's Path without even noticing.





Chapter 2

He wasn't sure how far he'd gone when suddenly a full moon came from behind the clouds. It made the land as bright as day. Pat looked up and realized he had taken the wrong turn, for right in front of him was a circle of dancing fairies. They danced around and around until Pat's feet **tingled**. Fairy music makes anyone want to dance, no matter how late it is and no matter how tired he is. Pat simply waited and watched. After a long time, a little man in a black hat, a green coat, and red shoes **beckoned** him into the circle.



"Won't you dance a song with us, Pat?" asked the little man, bowing till he nearly touched the ground. He didn't have far to go, for he was barely two feet high.

"I'll be proud to dance with ye," replied Pat. Before he could look round, Pat jumped in the circle and began dancing as though his life depended on it.



At first, his feet felt lighter than feathers. It seemed as though he could have danced forever. But soon he grew tired and would have liked to stop, yet the fairies wouldn't let him. So he danced on and on. Pat realized that he was under a spell and tried to think of some magic words to break it. But all he could think was:

"A dozen balls of gray yarn for Mistress Murphy. Three dozen bright buttons for the tailor. Half an ounce of throat drops for Father Andrew," over and over.

It seemed to Pat that the moon had almost set below the grass by the time the fairies finished dancing. But he couldn't be sure with all the spinning and running around. One thing he was sure of, though. He had danced every bit of leather off the soles of his shoes. His feet were blistered so that he could hardly stand. All the little fairies stood and held their sides while they laughed at him.





Chapter 3

At last, the fairy with the green coat and the red shoes stepped up to him. "Don't worry about it, Pat," he said. "I'll lend you my red shoes until morning, for you seem to be a good-natured sort of boy."

Well, Pat looked at the fairy man's shoes. They were the size of a baby's. He didn't wish to be rude, so he said, "Thank you, sir. If you would be kind enough to put them on my feet for me, perhaps you won't spoil their fine shape."



Pat thought that if the fairy man put them on Pat's big feet, it wouldn't be Pat's fault if the tiny shoes broke. So he sat down on the side of the Path, and the fairy man put the shoes on Pat's feet. As soon as they touched Pat's feet, the shoes grew to just the perfect size and fit him better than his socks. In addition, when he stood up, he didn't feel his blisters at all.

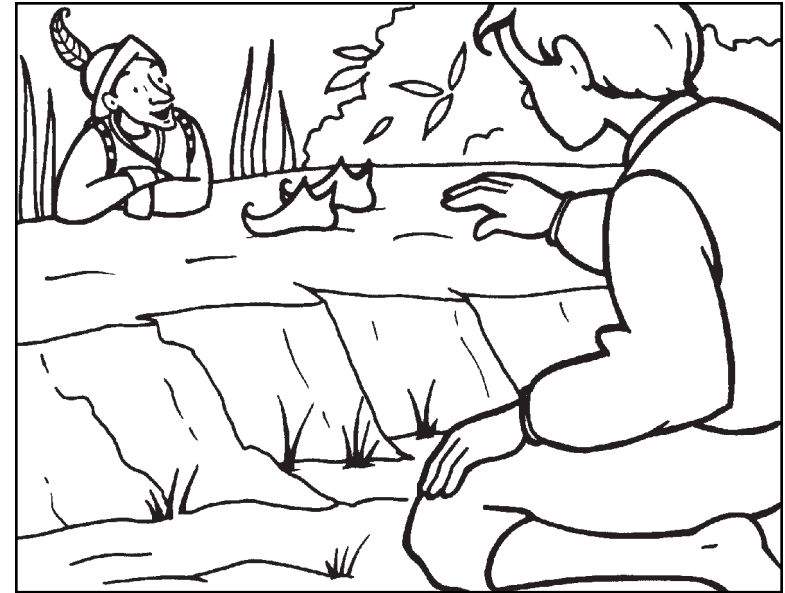
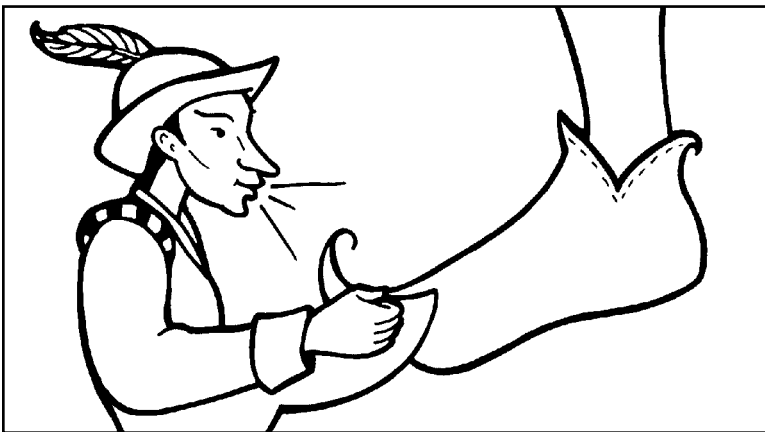
"Make sure you bring them back to the Path at sunrise," said the little man. Then Pat climbed the ditch and looked around. All around the roots of the bushes and in the grass were jewels and pearls.

"Do you want to help yourself, Pat, or will you take what I give ye?" asked the little man.

"I'll take whatever you give me and be thankful," said Pat, remembering his manners. The fairy man picked a large handful of yellow flowers from the bushes and filled Pat's pockets.

"Make sure you keep those, Pat," he said. Pat would have liked some of the jewels, but he said nothing. "Oh, and before you go, let me polish those shoes for you."

So Pat lifted each foot. The little man dusted the shoes off by breathing on them and rubbing them with the tail of his little green coat. "Home!" said the little man with a magical snap of his fingers. In an instant, Pat found himself standing on his own doorstep with all his deliveries safe around him.



Chapter 4

The next morning, Pat got up before sunrise and carried the shoes back to the Path. As Pat came up, the little man looked over the edge of the ditch.

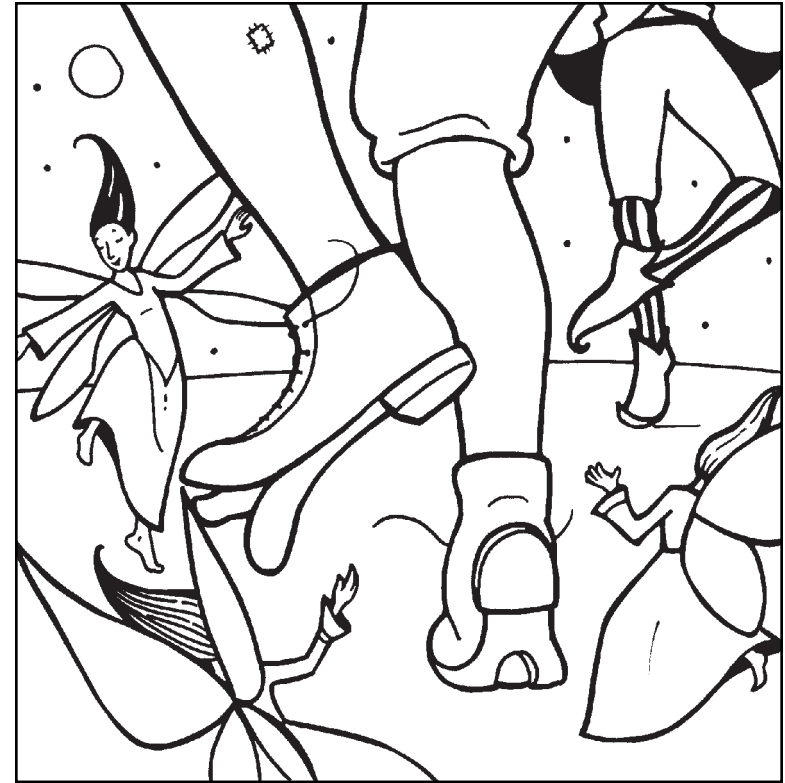
"Top o' the morning to you," said Pat. "Here are your shoes."

"Why, thank you, Pat. Have you had a chance to take a look at those flowers yet?"

"No, sir," replied Pat. "I came straight here when I woke up this morning."

“Make sure you look when you get back, Pat. And good luck to ye.” And with that, the little man disappeared. When Pat got home, he took a look at the little yellow blossoms. He had to rub his eyes twice. They had all turned to pure gold pieces.

Well, the first thing Pat did was go to the shoemaker to have him make a beautiful pair of new shoes. And being a kind boy, he told the curious shoemaker the whole story. The shoemaker began to feel greedy. He wondered if he could go to the Path and dance with the fairies that night.



Chapter 5

The shoemaker found his way to the Path all right. And when he got there, the fairies were dancing. But instead of waiting politely, he **barged** right in and began to dance with them. He danced the soles of his shoes off, as Pat had, and the fairy man lent him the red shoes. When the shoemaker came out of the ditch, he saw the jewels and pearls scattered in the grass.

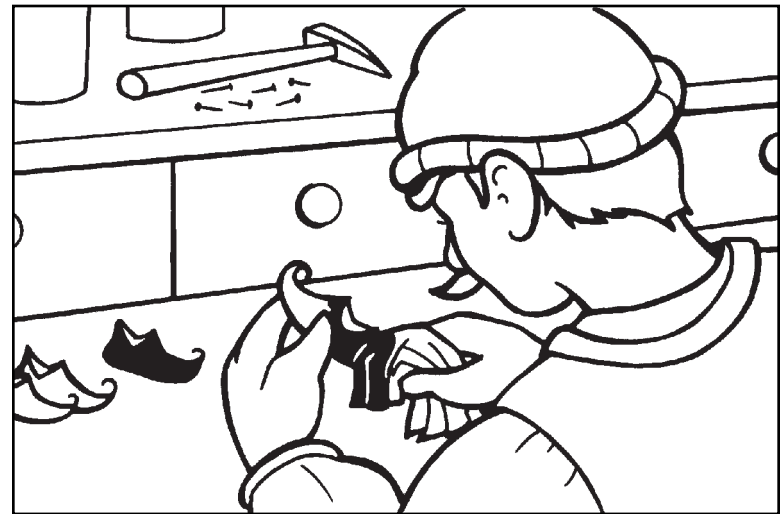
“Will you help yourself, or will you take what I give ye?” asked the little man.

“Why, I think I’ll help myself, if you please,” said the shoemaker. And he stuffed every pocket, plus his socks, with precious stones. The little man made him promise to return the shoes in the morning and sent him home in a twinkling.



When the shoemaker got home, he immediately pulled the jewels from his pockets. But not a single jewel remained; there was nothing but a heap of ordinary pebbles. The shoemaker swore and stomped, and then he thought to himself that he would keep the little man’s shoes. “Who knows what magic is in them?” he thought.

So he made a tiny pair of red shoes just like the fairy shoes. He covered the real shoes with black polish, so they couldn’t be recognized. Then at sunrise he went back to the Path. Just as before, the fairy man appeared at the edge of the ditch.





Chapter 6

"Top of the morning to ye," said the shoemaker. "Here are your shoes." He handed the fairy man the pair he had made. The little man looked at them, but he said nothing, and he did not put them on.

"Have you looked at the things I gave you last night?" said the little man.

"Oh, no. I came here as soon as I woke up," lied the shoemaker.



"Be sure to look when you get back," said the little man. And then the shoemaker grinned. He was sure that the fairy man had just **uttered** the magic words that would turn the pebbles back into jewels.

"Ah, sir," said the fairy man, "I believe there's a bit of dust on your shoes. Let me polish them for you."

“That means I’ll be home in an instant,” thought the shoemaker. But the little man breathed on his shoes and **muttered** some words the shoemaker couldn’t hear. Soon, the shoemaker’s feet began to tingle. Then they itched, and then they burned. Finally, he began to dance, and he danced all around the Path. The fairy man laughed and laughed, holding his sides. The shoemaker danced until he cried out from **exhaustion**, but the fairies drove him away. Where he went, nobody knows, but some say they’ve seen the greedy shoemaker dancing from sunset to sunrise around Murdoch’s Path.



Glossary

barged	jumped or rushed in impolitely (p. 16)
beckoned	called toward something (p. 7)
brambly	covered with thorn bushes (p. 6)
exhaustion	extreme tiredness (p. 21)
fetch	to bring; to get (p. 5)
infested	containing many, especially many bad things (p. 6)
muttered	said quietly under the breath (p. 21)
tingled	felt prickly or itchy (p. 7)
trustworthy	honest; easily trusted (p. 4)
uttered	spoke, especially important words (p. 20)

Name _____

INSTRUCTIONS: Compare the following story elements from *Murdoch's Path* and another folktale of your choice.

	Murdoch's Path	
Hero		
Villain		
Setting		
Magic or magical character		
Hero's Test		
Hero's Reward		
Villain's Punishment		
Moral		

Name _____

INSTRUCTIONS: Find each word from *Murdoch's Path* and, using the context of the word, think of a synonym for that word. Write the synonym in the blank. Then, rewrite the sentence from the book, using the synonym instead of the first word.

proper (p.6)

realized (p.7)

good-natured (p.11)

ye (p.12)

in a twinkling (p.17)

uttered (p.20)

in an instant (p.21)

Rattlers

A Reading A-Z Level R Leveled Reader

Word Count: 1,505



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Rattlers
Level R Leveled Reader
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Written by Robert Charles
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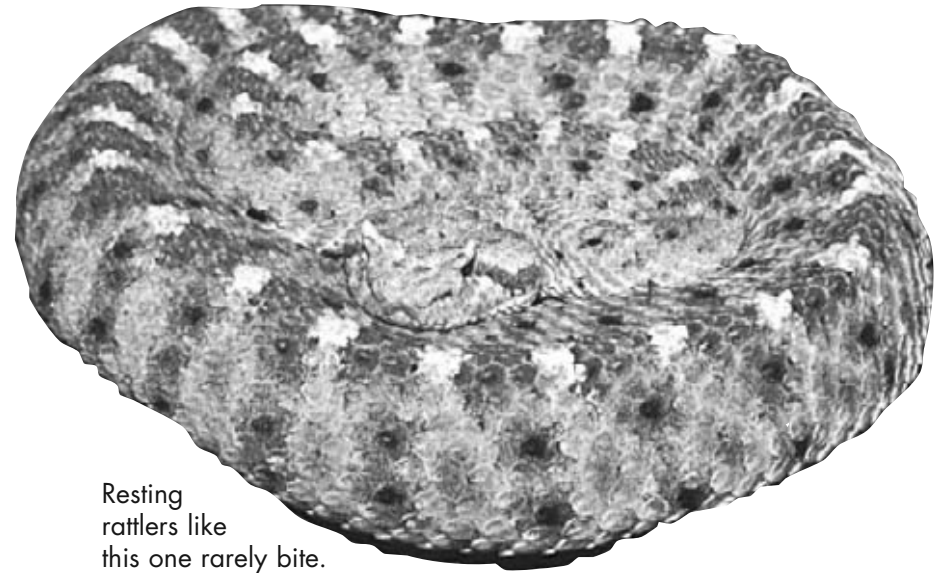
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Resting
rattlers like
this one rarely bite.

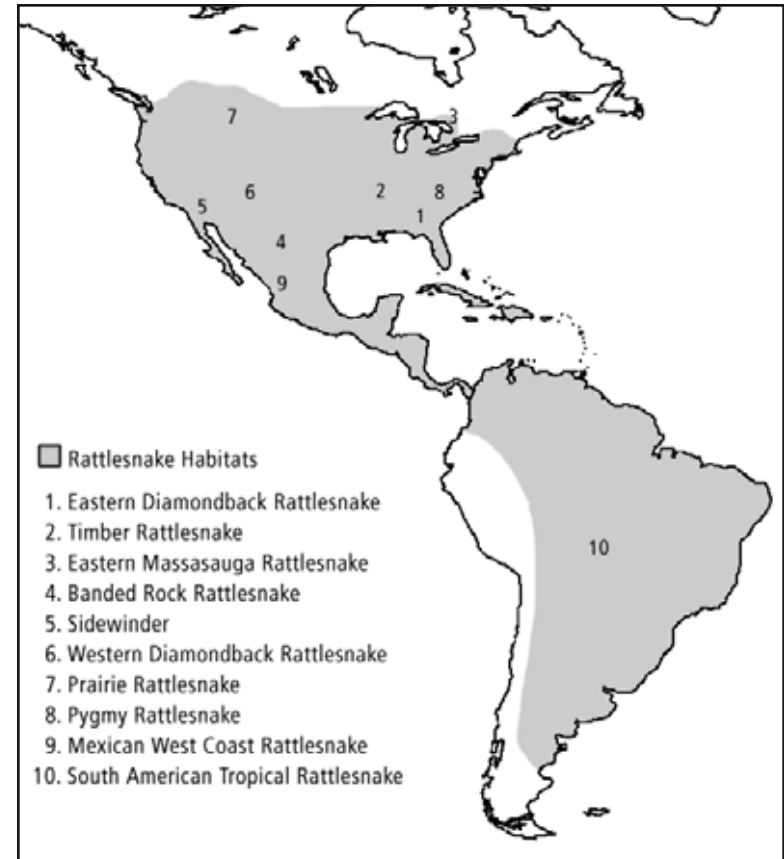
INTRODUCTION

While most snakes are harmless, there are a few that can strike with a deadly bite. Rattlesnakes, commonly known as rattlers, are some of the most feared of these deadly snakes. But before you get the wrong idea about rattlers, let's set the record straight. Snakes don't go around looking for someone to bite. In fact, most snakes, including rattlers, would rather avoid people. And also, most people who are bitten by rattlesnakes do not die from the bite.

You should also know that snakes have an important role to play among living creatures. Rattlers eat rodents such as rats and mice. Since many rodents carry diseases and destroy valuable crops and property, rattlesnakes help humans by keeping the number of rodents under control. So the next time you think bad things about rattlesnakes, don't forget the good they do.



A rattler eating a mouse



Many species of rattlesnakes live across North and South America. The numbers indicate the center of each territory.

WHERE RATTLESLERS LIVE

All of the world's rattlesnakes are found in North and South America. They live in almost every state of the United States, in every South American country, and throughout southern Canada. Their **habitat**

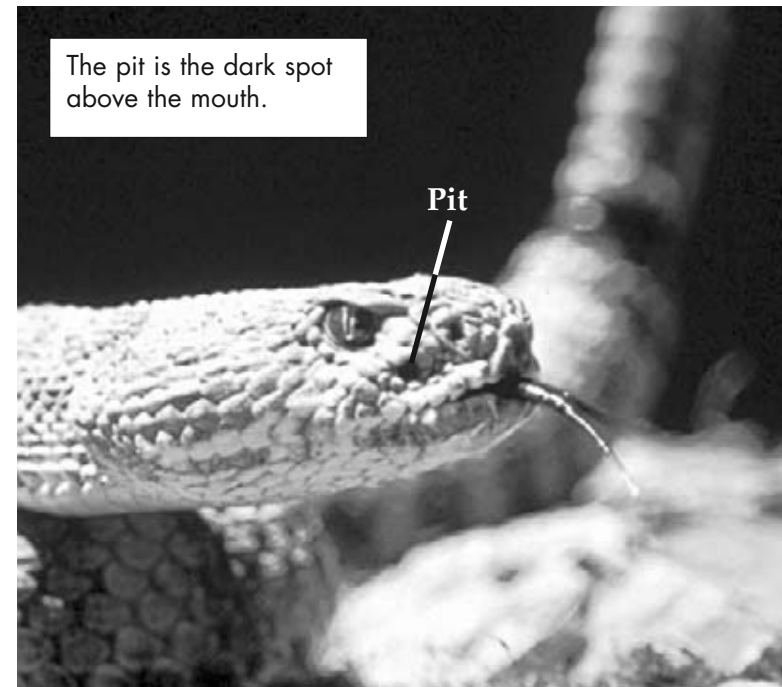
includes swamps, deserts, prairies, forests, and mountains. The greatest numbers of rattlesnakes are found in the deserts and dry areas of the southwestern United States and northern Mexico.

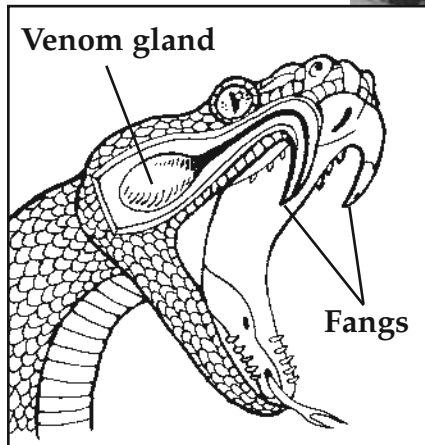
Like all reptiles, rattlesnakes are **cold-blooded**. This means their body temperature goes up and down with the temperature around them. Because they can't keep their bodies warm, rattlers spend the winter **hibernating** in dens below the ground. For the most part, rattlers are loners, but during hibernation, hundreds can gather in the same den.

As spring begins, rattlesnakes crawl out of their dens to bask in the sun. As the sun warms their bodies, the rattlers become more active and get ready to spend the summer hunting. You are most likely to see rattlesnakes when the temperature is 21° to 30° C (70°–90° F). In areas where it gets really hot during the day, rattlers must find shady places to stay cool. They often like to lie under rocks, bushes, cacti, and trees.

HOW RATTLESLERS HUNT

Rattlers belong to a group of snakes called **pit vipers**. Pit vipers have deep, heat-sensing pits below their eyes. The pits detect the body heat of rodents, birds, and other **prey**. A rattler can detect the heat of a candle flame from as far away as 10 meters (30 ft.). Rattlers also “smell” with their forked tongues by flicking them in and out of their mouths. Using heat and smell to find food makes rattlers good night hunters.





The rattler's fangs swing down in preparation for a bite. The illustration at left shows the structures that produce venom and send it through the fangs.

Using their blending skin patterns, rattlers hide near small trails or holes where rodents, lizards, and birds pass by. As the prey goes by, the snake strikes with its long, hollow **fangs**. Normally, the fangs are folded back against the top of a rattler's mouth. When the snake bites, its fangs drop down and its mouth opens wide enough to drive them through the skin. Rattlers produce a poison called **venom** in glands behind their eyes. When the snake bites, the venom travels through tubes into the fangs. The fangs act like doctors' needles, giving the victim a "shot" of venom.



Unless the prey has a good chance of escaping, such as if it can fly, a rattlesnake lets go after it bites. The prey runs off, but it does not go far before the poison begins to take effect. Rattlesnake venom works in two ways. First, it affects the nerves and muscles so that the victim has difficulty breathing and moving. Second, it begins to break down the victim's muscles and organs. By the time the rattler is ready to eat its victim, digestion has already begun.

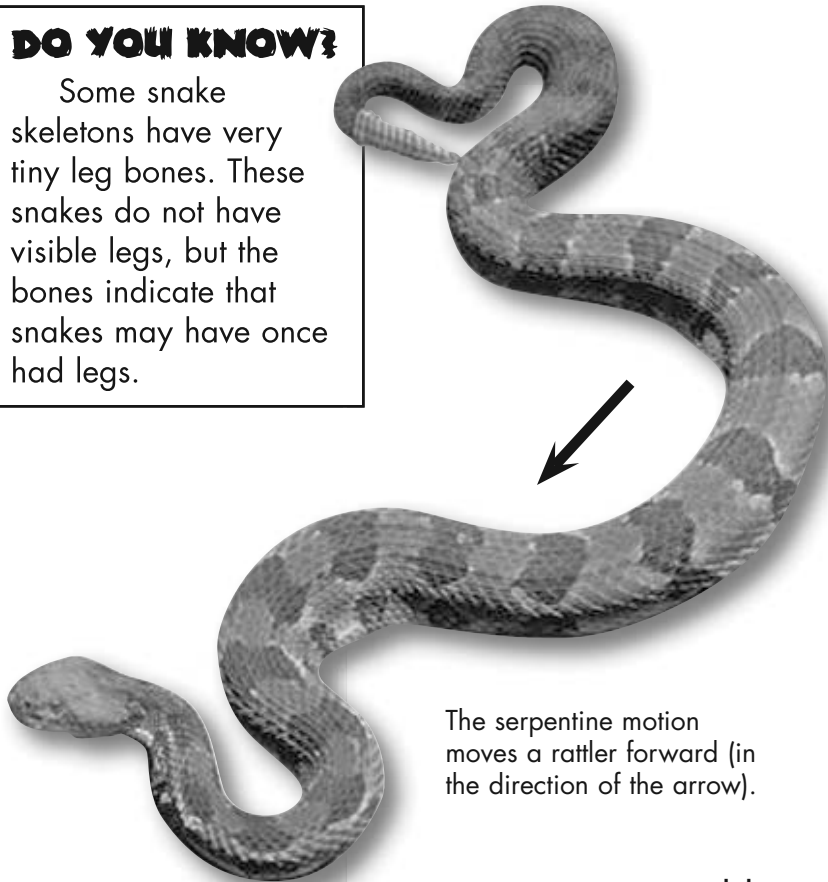
The snake uses its "smelling" tongue to follow its victim. Once the snake finds its prey, it swallows it whole and headfirst. Rattlers can separate their lower and upper jaws in order to swallow prey that is larger than their own heads. Since snakes don't use energy keeping themselves warm, rattlers can last for months on one meal.

HOW RATTLES MOVE

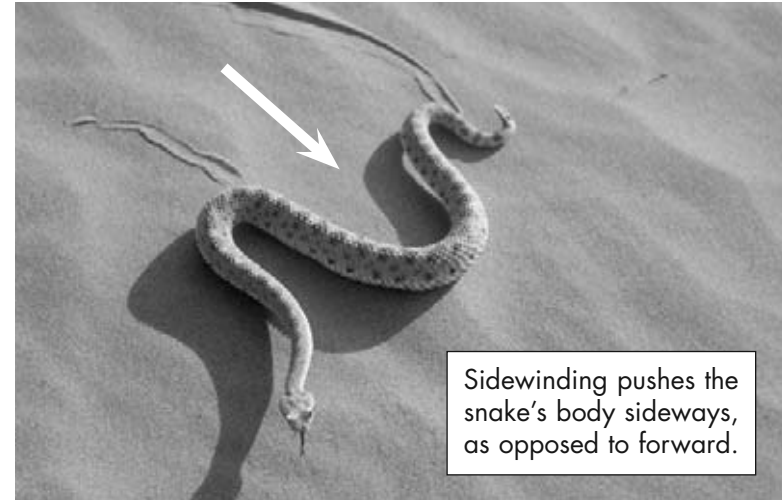
How can something with no legs hunt other animals? Rattlesnakes move in three ways. The most common is the **serpentine** (SERP-en-teen) method. The rattlesnake moves its body in an S-shaped motion. Muscles along the curves push the snake forward against the ground. This motion also makes rattlesnakes excellent swimmers.

DO YOU KNOW?

Some snake skeletons have very tiny leg bones. These snakes do not have visible legs, but the bones indicate that snakes may have once had legs.



The serpentine motion moves a rattler forward (in the direction of the arrow).



Sidewinding pushes the snake's body sideways, as opposed to forward.

The **sidewinding** motion is only used by a few kinds of rattlers that live in sandy deserts. It looks a lot like the serpentine motion, only it pushes the snake sideways.

The third type of movement, the **caterpillar**, uses the snake's scales. Rattles have wide, flat scales across their bellies. The snake can use its muscles to lift and lower the edges of the scales. The edges dig in and push the snake's body forward, the way caterpillar treads push a tractor forward.



The caterpillar motion was named after Caterpillar® tractors.

BABY RATTLES

Female rattlers begin having babies when they are three or four years old. Rather than laying eggs like most reptiles, rattler mothers give birth to live babies. Rattlers usually have 10 to 12 babies each time they give birth.

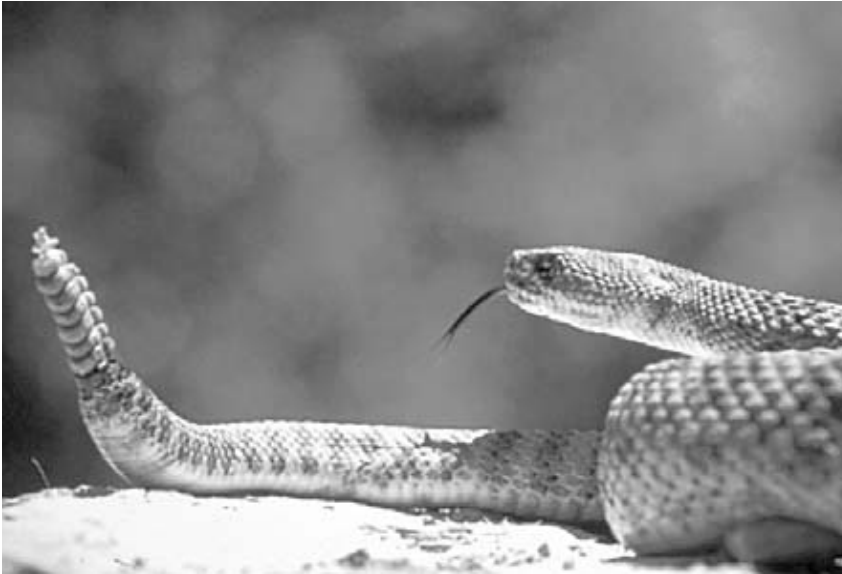
After they are born, baby rattlers do not need their mothers. However, they tend to stay close to their mothers for about ten days until they shed their baby skin and begin to hunt. Baby rattlers may outgrow and shed their skins 3 to 4 times each year.



Baby rattlers (left) stay near their mother until they shed their skin.

Even at birth, a baby rattlesnake has a poisonous bite. But babies do not have rattles. They cannot sound a warning. The babies also have less control over how much venom they inject. In these ways, tiny baby rattlers can be more dangerous than big adults. On the other hand, many predators, including owls, hawks, ravens, coyotes, and even other snakes eat baby rattlers.





A rattler warns other animals to keep away.

A RATTLER'S RATTLE

The rattle makes rattlesnakes different from all other snakes. The rattle serves as a warning to any animal that threatens the snake. Each time the snake sheds its skin, or molts, a section of hollow, fingernail-like material is left behind on its tail. The rattle sections get bigger as the snake grows. When it is afraid, the snake coils up and shakes its tail. The hollow sections clatter against each other, making a buzzing sound. This gives rattlers the nickname “buzztails.”

Some people think you can tell the age of a rattler by the number of sections on its rattle. But older parts of the rattle break off. There are usually no more than ten sections. Since rattlers can live 25 years and molt 2 to 3 times a year, it is probably good that sections fall off. Otherwise, an old rattler might have a huge rattle with up to 75 sections. Can you imagine how loud an old “buzztail” with a rattle that big would be?



Rattlers coil up and lift their heads when threatened.



The eastern diamondback has bold patterns.

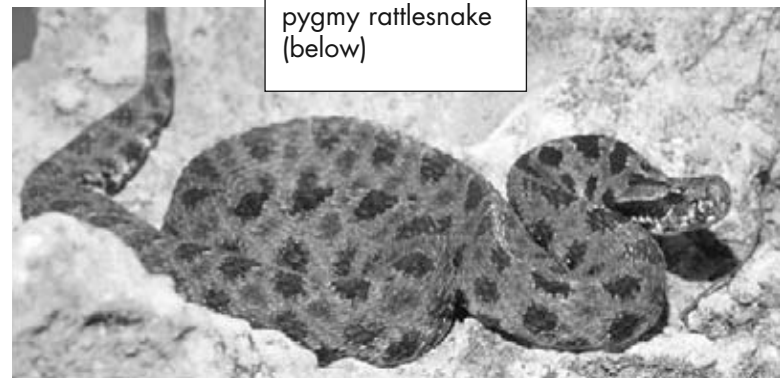
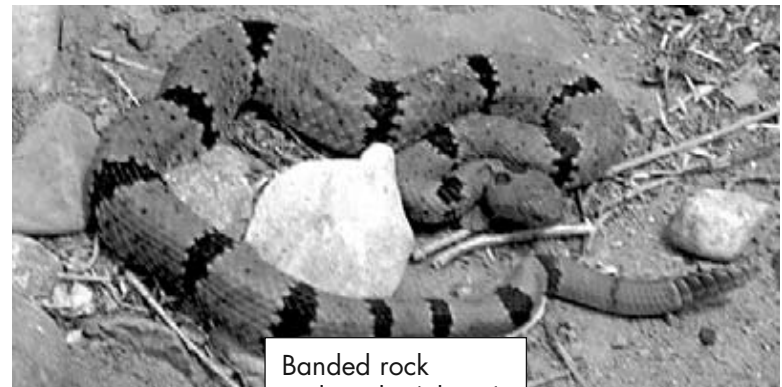
TYPES OF RATTLES

There are more than 30 types of rattlers. The largest are the eastern diamondbacks. They have been known to grow to almost 2.5 meters (8 ft.). Western diamondbacks are slightly shorter, but they can be thicker and heavier than eastern diamondbacks. Most western diamondbacks grow from 1 to 1.5 meters (3–5 ft.). Diamondbacks get their name from the diamond-shaped pattern on their skin.

Timber rattlesnakes can be found in many wooded parts of North America from southern Canada to northern Mexico. They are about 1.5 meters (4–5 ft.) long.

Other common rattlers include the sidewinders. They get their name because they move across the desert sand using the sidewinder motion. Sidewinders are smaller than diamondbacks, usually less than 1 meter (3 ft.) long.

Smaller rattlesnakes include the banded rock and pygmy rattlers. How do you think these snakes got their names?



Banded rock rattlesnake (above);
pygmy rattlesnake (below)



A rattler in a defensive posture

SNAKEBITE

Other than when hunting, rattlers only bite in self-defense. Most people get bitten when they bother the snake or accidentally step on it. Often, a threatened rattler gives a “dry” bite with no venom. And even if the snake does inject venom, it usually injects a small amount. Rattlers aren’t trying to kill people or animals that threaten them. They only want to hurt the person or animal enough so that he or she will go away and keep away in the future.

RATTLESNAKE SAFETY

Most people who get bitten by rattlesnakes were trying to catch, tease, or kill the snake. Rattlers are not dangerous if you follow these safety tips:

- ❶ Never bother a rattlesnake or other snake. Snakes are wild animals, and you should not try to catch or touch them.
- ❷ If you go into wilderness areas where snakes may live, wear long pants and boots that cover your ankles. Snakes bite down low, and a layer of clothing can block a bite.
- ❸ Keep your pets on leashes. Do not let your dog get close to or chase after snakes.
- ❹ Do not stick your hands or feet under rocks, logs, or bushes where you cannot see. Snakes like to hide under things.
- ❺ If you hear a rattle, stop moving immediately. Calmly look around and try to spot the snake with your eyes. Back slowly away from the snake. Remember, rattlesnakes are trying to warn you with their rattle—they do not want to bite you if they don’t have to. Pay attention to that warning.

RATTLESNAKE SAFETY

If you or someone you know is bitten, follow these steps. Follow the same steps for your pet:

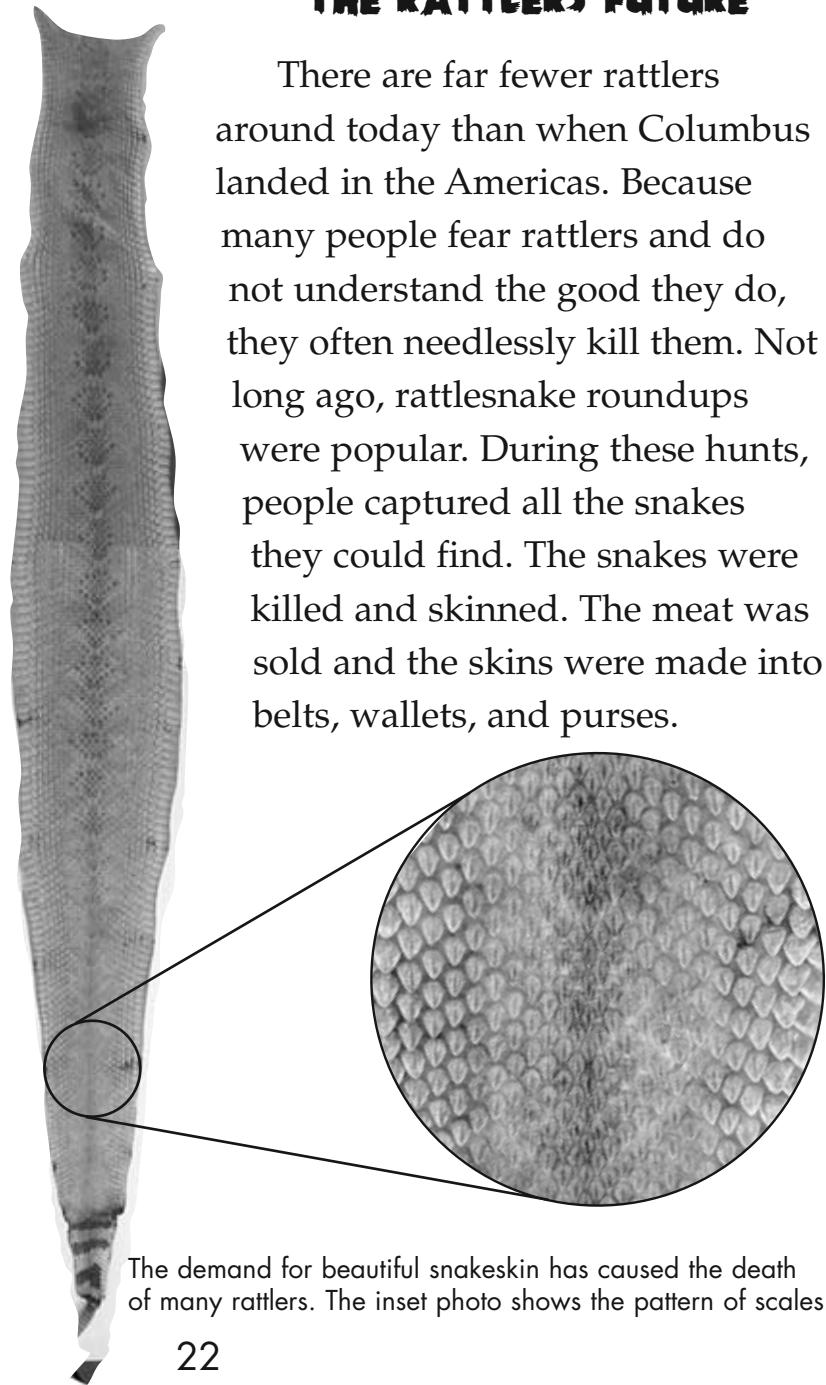
- ❶ Keep the victim calm. Panic will only make the heart beat faster, carrying the venom through the body more quickly.
- ❷ Get to a doctor as quickly as possible, but do not let the victim run or do any other exercise. If possible, have someone carry the victim.
- ❸ Put a cool, wet cloth over the bite. Do not use ice, since ice can cause frostbite.
- ❹ Tell the doctor or hospital workers what kind of snake you think may have bitten the victim. But do not try to catch the snake, kill it, or bring it to the hospital.

DO YOU KNOW?

Antivenom, the medicine used to treat snakebites, comes from horses. Doctors inject the horse with a little bit of snake venom. The horse is not hurt, but it builds up a chemical that stops the effects of the poison. Doctors collect this chemical, which also stops venom's effects in people and other animals.

THE RATTLES' FUTURE

There are far fewer rattlers around today than when Columbus landed in the Americas. Because many people fear rattlers and do not understand the good they do, they often needlessly kill them. Not long ago, rattlesnake roundups were popular. During these hunts, people captured all the snakes they could find. The snakes were killed and skinned. The meat was sold and the skins were made into belts, wallets, and purses.



The demand for beautiful snakeskin has caused the death of many rattlers. The inset photo shows the pattern of scales.

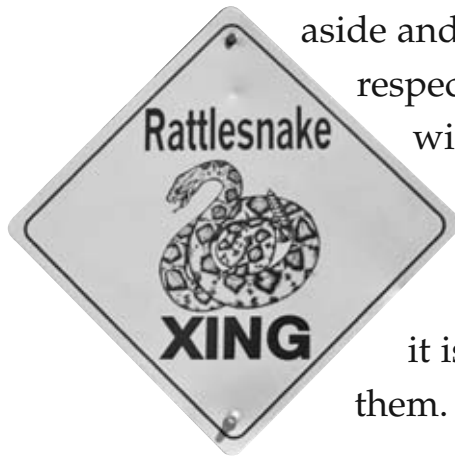
Other things threaten the survival of rattlesnakes. Rattlesnakes like to sun themselves on warm roads. Cars and trucks kill many of these snakes. People also destroy rattlesnake habitats as they build larger cities and more highways.

Some people are beginning to take action to help rattlesnakes survive. Many rattlesnake roundups have been banned or limited. Signs alert drivers to



roads where rattlesnakes may be sunning themselves. Snake habitats have been set

aside and protected. If we respect these animals, they will not hurt us. And as we learn more about rattlesnakes, we understand why it is important to protect them.



GLOSSARY

caterpillar	a snake motion in which the edges of the snake's scales catch on the ground and pull the snake's body forward (p. 12)
cold-blooded	body temperature goes up and down with the temperature around it (p. 7)
fangs	long, hollow, sharp teeth (p. 9)
habitat	the types of places where an animal lives (p. 6)
hibernating	spending the winter in a deep sleep or trance-like state (p. 7)
pit vipers	snakes that have pits on their heads that detect heat (p. 8)
prey	animals that other animals eat for food (p. 8)
serpentine	a snake motion in which the snake moves its body in an S-shape, pushing itself forward where its body bends (p. 11)
sidewinding	a snake motion in which the snake moves in a fast, strong S-shape, pushing its body sideways (p. 12)
venom	poison that animals use to kill prey and defend themselves (p. 9)

Name _____

INSTRUCTIONS: Write the main ideas and supporting details for each of the chapters listed below.

Main Ideas

Supporting Details

Where Rattlers Live



How Rattlers Move



Baby Rattlers



A Rattler's Rattle



Name _____

INSTRUCTIONS: Read each sentence and underline the adverbial phrases. In the blank next to each sentence, write whether the phrase tells you *how* or *where*.

1. Rattlers smell with their forked tongues. _____
2. They like to lie under rocks and bushes. _____
3. Timber rattlers can be found in wooded areas in North America. _____
4. They move across the desert sand with a sidwinding motion. _____
5. Snakes bite around the feet and ankles, so a layer of clothing can protect you. _____
6. The rattler strikes with its long, hollow fangs. _____
7. Rattlers live throughout southern Canada. _____
8. Rattlers spend their winters hibernating in dens below the ground. _____



Name _____

INSTRUCTIONS: Create new words by adding *-ion* or *-tion* to the following words. Use each new word in a sentence.

collect _____ _____ _____ _____ _____	illustrate _____ _____ _____ _____ _____
reserve _____ _____ _____ _____ _____	hesitate _____ _____ _____ _____ _____
react _____ _____ _____ _____ _____	erupt _____ _____ _____ _____ _____

Name _____

INSTRUCTIONS: Read the clues at the bottom of the page and fill in the correct words in the blanks.
Then find these words in the word find.

B S E R P E N T I N E
U U A O Y V E N O P F
M B Z D B H E F D B A
Z O R E C L Q A Y U Z
M P L N T V E N O M M
O E H T W I Z G N W X
R J A S R O R P A Q S
T R Z B U Z Z T A I L

RATTLERS • LEVEL R • 4

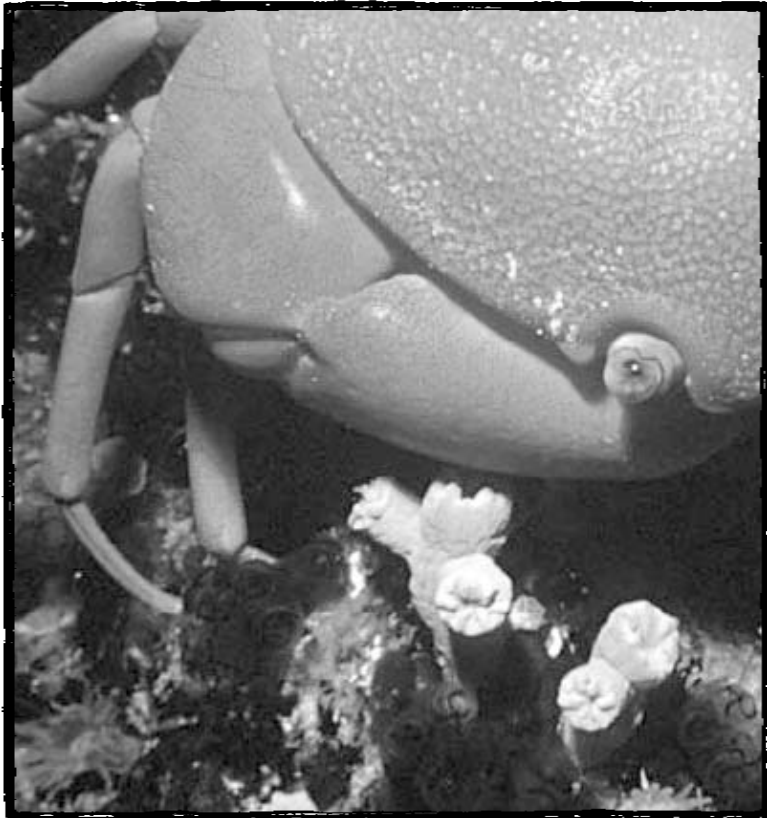
1. the hollow tooth of a snake
2. nickname for a rattlesnake
3. poison
4. rats and mice
5. the shedding of skin
6. found at the end of a rattler's tail
7. moving in an s-shape

SKILL: CONTENT VOCABULARY

Exploring Tide Pools

A Reading A-Z Level R Leveled Reader

Word Count: 1,617

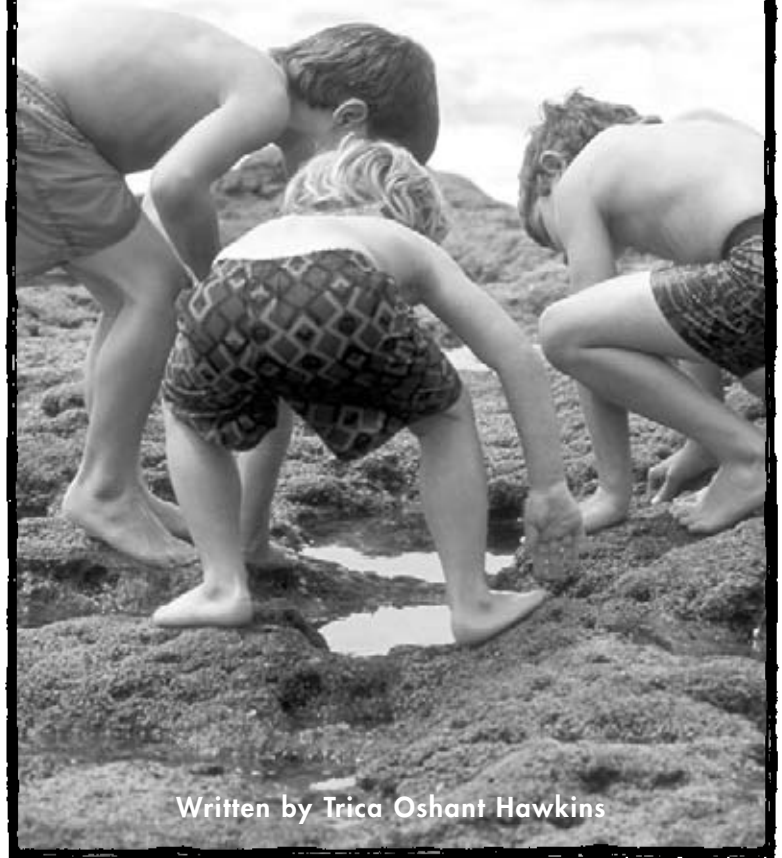



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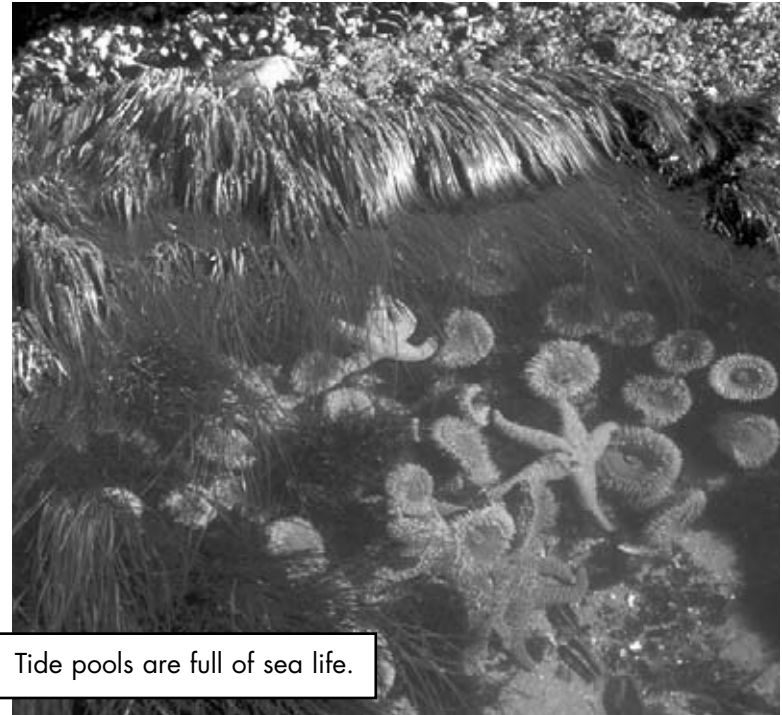
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Tide pools are full of sea life.

What Are Tide Pools?

The tide is the rising and falling of the ocean where it meets the land. The tide rises and falls twice each day. In some areas, little pools of seawater are left behind when the tide goes out. These are tide pools. Most tide pools are found in low areas along rocky shorelines. You might also find small tide pools on sandy beaches. Any place along the shoreline that traps water creates a tide pool.

What Causes Tides?

The tides are caused by the force of **gravity**. The sun and moon have strong gravity that pulls on Earth. This gravity pulls on both land and water. But only the water can move in response to gravity. When the sun and moon pull on Earth, they pull the ocean water into two mounds.



A dock with boats at high tide (top),
and the same dock at low tide (bottom)

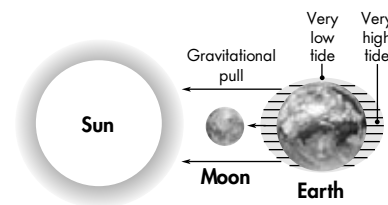


The **rotation**, or spin, of Earth causes the rising and falling of the tides. As land areas move into and out of where the water is in mounds, the tides slowly rise and fall. Since Earth makes one full rotation each day, there are two high tides and two low tides every 24 hours.

The moon also moves around Earth, and this movement affects the tides. Twice each month, the moon and sun line up. They pull on the ocean water together. Their combined gravity causes higher mounds of water, creating the highest and lowest tides of the month. These tides are called **spring tides**. At other times, the sun and moon pull against each other. At these times, the high tides are not as high, and the low tides are not as low. These are called **neap (neep) tides**.

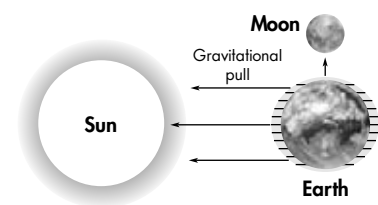
Spring Tides

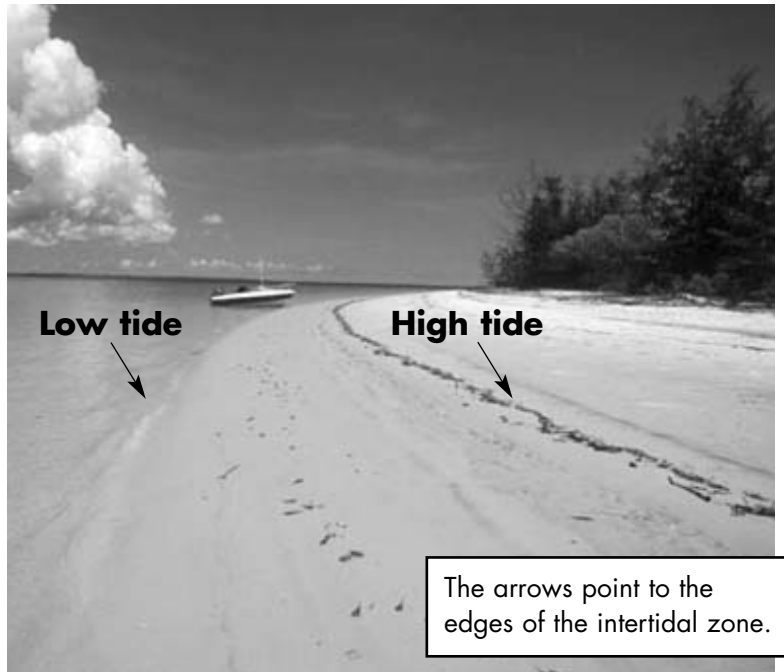
Sun and moon pull together and cause very high and low tides.



Neap Tides

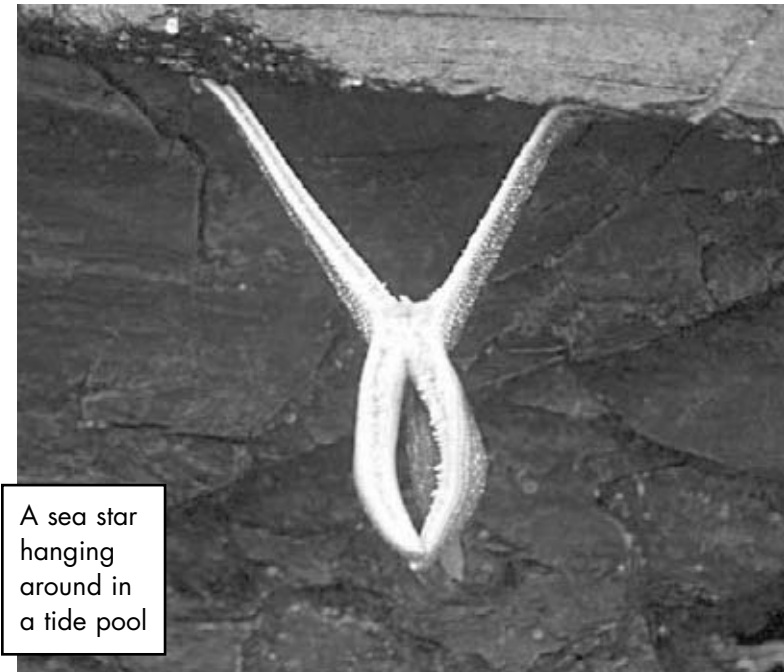
Sun and moon pull against each other and make smaller tides.





The Intertidal Zone

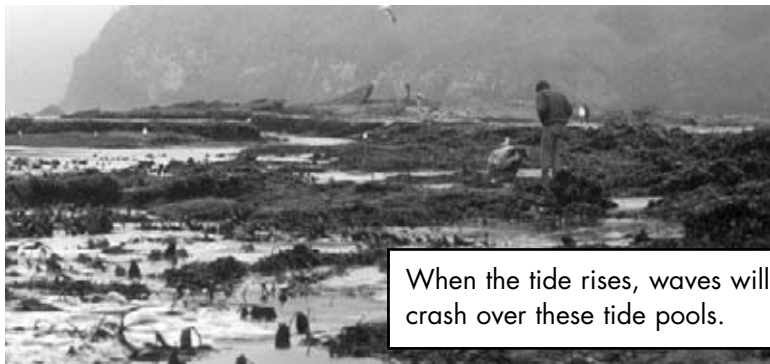
The area along the shore between high tide and low tide is the **intertidal zone**. This area is covered by seawater during high tide and exposed to air during low tide. The area closest to the sea is only exposed to the air during the very lowest tides. The area farthest from the sea is only covered by water during the highest tides. Different creatures live in different parts of the intertidal zone, depending on whether they need air or water.



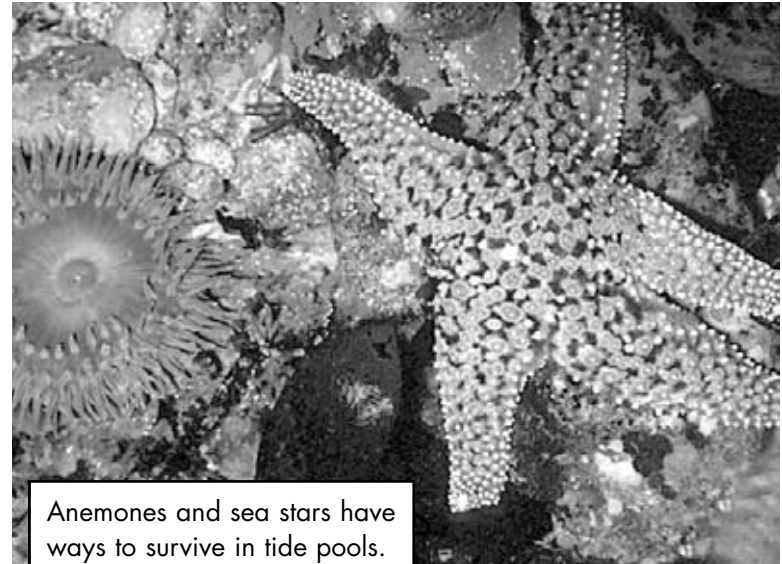
What Is Life Like in a Tide Pool?

Tide pools are full of sea life. You can see these creatures when the tide goes out. Usually, the more places there are for animals to hide or attach themselves, the more animals you will find in a tide pool. The tide pools with the most animals usually occur in rocky areas. The material the animals live in or attach themselves to is called the **substrate**. In tide pools, the substrate is usually rocks or sand.

Surviving in the intertidal zone is difficult for the animals there. Imagine living where seawater washes in and out of your home every day! The animals in tide pools have to be able to deal with waves crashing over them. If they don't hang on tight or get out of the way, they could be tossed around, battered against rocks, or even swept away.



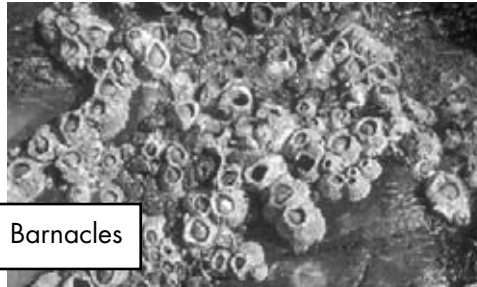
But it isn't just seawater that threatens the animals of the intertidal zone. Exposure to the air and sun is also dangerous. For an animal that needs to be covered by water, exposure to air causes two major problems. The first problem is drying out. The second problem is that these animals are suddenly exposed to **predators** looking for an easy meal. So how do intertidal-zone animals survive?



Intertidal animals have **adapted** to life in the tide pools. These animals are used to the tide coming and going from their homes every day. They have ways of clinging to rocks and finding protection from crashing waves. They have ways of preventing their bodies from drying out in the air. They also have ways of avoiding the beaks and jaws of predators.

How a tide pool animal survives depends on whether it is stuck in one place or can move around. Many animals are attached to the substrate, and they do not move around. This prevents them from being washed away.

Some animals, such as mussels, have very strong hair-like fibers that attach to the substrate. Other animals, like barnacles (BAR-nick-els), create cement-like “glue” that they use to attach themselves to rocks. Because they cannot move around, these animals cannot escape from the sun, air, or predators.



Barnacles

Tide pool animals that are **mobile**, or can move around, are able to run, swim, and crawl. Some of these creatures are sea creatures that become trapped in tide pools during low tide. They cannot return to the sea until the high tide returns. But because they are mobile, they can seek shelter from the air, sun, and predators.



A crab on the move

Anemones need moisture to survive.



Drying Out

Most stationary tide pool creatures have developed ways to protect their bodies from drying out. Some animals, such as barnacles and oysters, have hard shells that they can close or crawl into during low tide. Once in their shells, they have enough moisture to keep from drying out until high tide returns. The stationary animals most in danger of drying out are the soft-bodied creatures such as sea anemones (ah-NEM-oh-nees). These animals are usually found close to the ocean, where the low tide does not uncover them for very long. When the tide is out, they close up their bodies as much as possible to keep moisture from escaping.

Mobile tide pool animals have a better chance of survival, since they can move to prevent drying out in the sun and air. Many can dig into the sand, while others seek shelter under rocks or seaweed. A group of very thin crabs called slider crabs can slide their flat bodies into cracks between rocks. Slow-moving animals such as marine snails can hide inside their shells. They can actually close a little “trap door” to seal themselves inside. But usually there is enough water in a tide pool for mobile animals to swim or crawl about.



Crabs can hide in burrows in wet sand.



Crabs feasting on tiny sea creatures

Eating and Being Eaten

Eating and being eaten are facts of life everywhere, even in tide pools. Tide pool animals have unique and interesting ways of finding and eating food. Oysters and clams use hair-like parts to trap tiny animals floating in the water. Anemones and jellyfish sting tiny animals with their tentacles. An octopus uses its strong arms and suction cups to catch other animals. Crabs and lobsters use their claws to pick up food.

Tide pool animals also have amazing ways to avoid being eaten. Often, the way animals avoid drying out also helps them avoid being eaten. They simply slide under rocks or slip into their shells. Other tide pool animals run, scuttle, swim, or even jump to escape hungry predators. Some tide pool animals blend in with their surroundings. This helps them hide from predators.

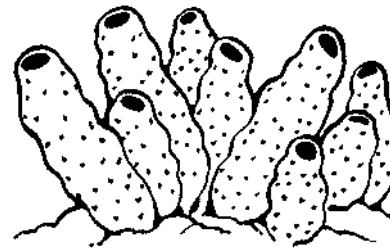


Seagulls will eat almost any small sea creatures they can find.

What Lives in Tide Pools?

Invertebrates

The most common kinds of animals in tide pools are called **invertebrates**. These animals have soft bodies and no backbones. They range from creatures such as sponges and corals to creatures such as octopi and sea stars. Invertebrates also include animals such as anemones, jellyfish, worms, crabs, shrimp, snails, and urchins. Invertebrates can be stationary or mobile. These drawings show invertebrates commonly found in tide pools.

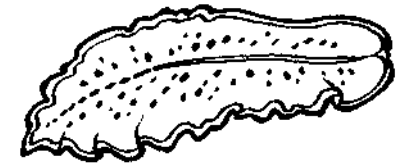


◀ Sponges

Lumpy, irregular bodies
Small holes all over bodies
Stationary; stuck to the substrate

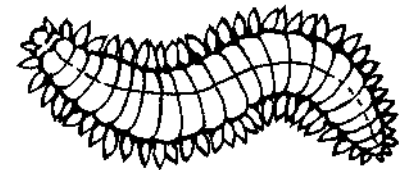
Flat worms ▶

Flat, worm-like bodies
Mobile



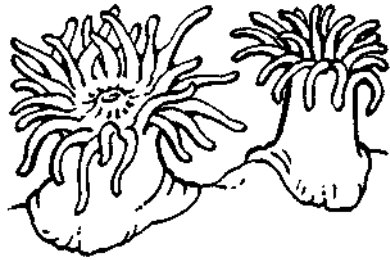
Segmented worms ▶

Flat or round segments or sections
Mobile



Corals ▶

Hard skeletons or shells
Soft bodies with tentacles
Stationary

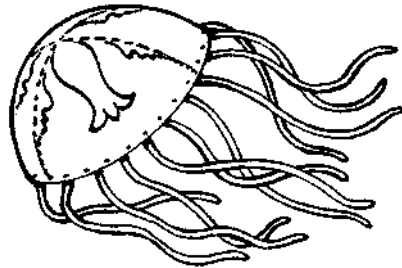


◀ Anemones

Flower-shaped bodies
Tentacles with stinging cells
Usually, but not always,
stationary

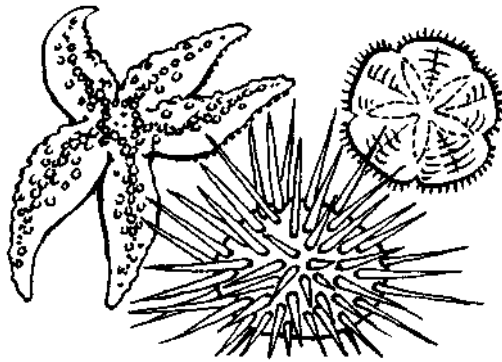
Jellyfish ▶

Bell or dome-shaped bodies
Long tentacles with
stinging cells
Mobile



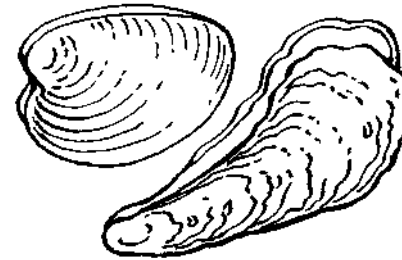
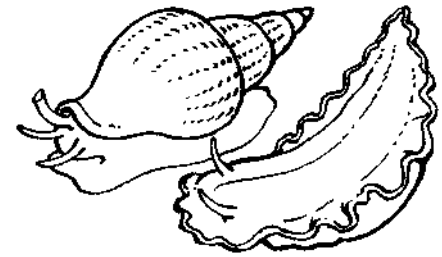
◀ Sea stars, sea urchins, and sand dollars

Spiny skin
Bodies with sections
arranged in a circle
Can move slowly



Snails and slugs ▶

Soft bodies
Crawl on single "foot"

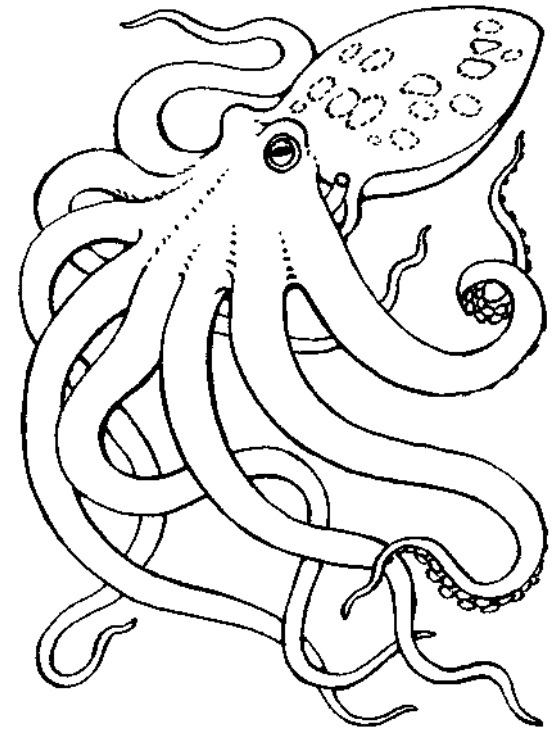


◀ Clams and oysters

Soft bodies
Hard, two-sided shells
Usually stationary,
but can move
in an emergency

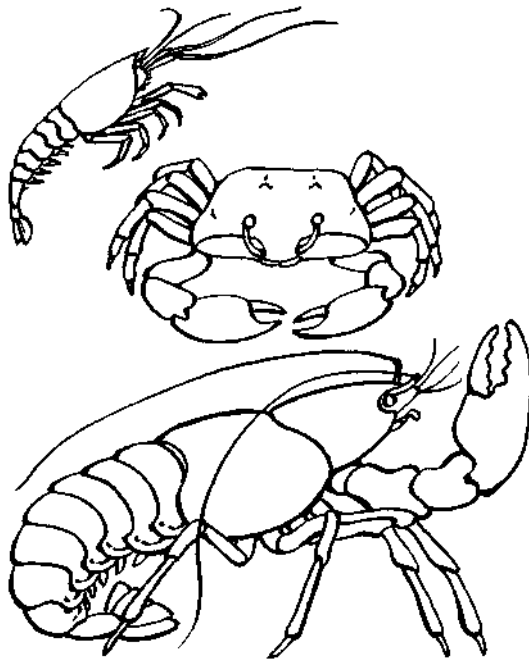
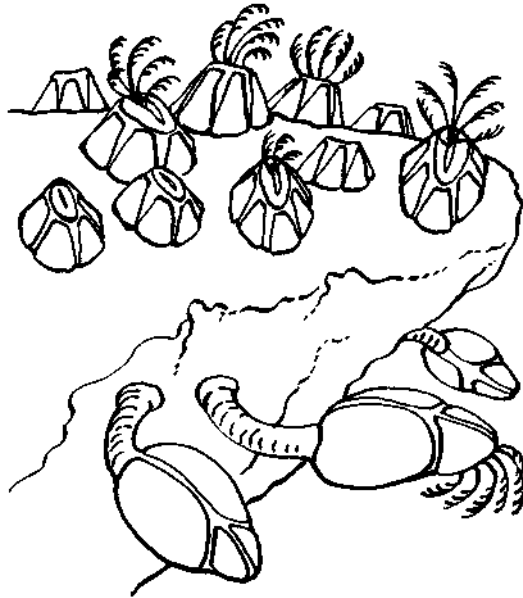
Octopi ▶

Soft bodies
Hard beaks
Eight arms
Swim very fast



Barnacles ▶

Stationary;
hard shells
stuck to rock
Segmented legs



◀ **Shrimp, crabs, and lobsters**

Segmented legs
and bodies
Hard outer shells
Mobile

A kelpfish in a tide pool



Fish

Another group of animals commonly found in tide pools is fish, which do have backbones. There are many types of fish that are adapted to life in the tide pools. Since tide pools are small compared to the ocean, fish that live in them are usually small. Other fish accidentally get trapped in tide pools when the tide goes out. These fish are not used to living in such a small space. They wait until the tide returns to swim off in the open sea.

Land Animals

Many land animals also visit tide pools. The shallow water in tide pools makes it easy for these animals to find and eat sea creatures. Many birds, including seagulls and ravens, eat oysters, mussels, and fish. Mammals such as raccoons and monkeys can scoop up animals and eat them.



A shorebird eating a shellfish

Plant-Like Organisms

There are also many plant-like organisms in tide pools. Most of these belong to a group called marine **algae**. They are also known as seaweed. There are many different types of seaweed, but only some of them are found in tide pools. Seaweed provides good hiding places for animals. It also provides a substrate to which some animals attach themselves or their eggs.



Marine algae, or seaweed



Tide pools are full of fascinating creatures.

Exploring Tide Pools

Tide pools are fun to explore. They are like an aquarium full of sea creatures. If you ever go to the ocean, find a place where there are tide pools. The best places to find tide pools are rocky shores. Pay attention to the rising and falling of the tides. Usually newspapers near the oceans publish the times and heights of the tides. Remember, the lower the tide, the more you are likely to see.

When you find a tide pool to explore, there are some things you can do to help you see more creatures. It is best to move slowly and gently to avoid stepping on or crushing animals.

Sometimes it is a good idea to just stop and closely observe one small area that you find interesting. The longer you look, the more likely you are to see things.

Remember that the tide pool is home to many creatures. If you lift up a rock to look for creatures, do so gently. Always put rocks back where you found them. Check with an adult if you want to pick up a tide pool animal—some of them can sting! Put some water in your hand first to keep the animal moist. And always put sea creatures back where you found them. Animals need to stay in their tide pool homes. They don't make good pets and are likely to die if they are removed from the tide pool.



Glossary

adapted	changed or shaped to work in a certain situation (p. 10)
algae	plant-like organisms, including seaweed (p. 21)
gravity	the force that pulls things toward very large objects (p. 5)
intertidal zone	the zone between the highest tide level and the lowest tide level (p. 7)
invertebrates	animals without backbones (p. 16)
mobile	can move around (p. 11)
neap tides	the smallest tides of the month that happen when the sun and moon pull against each other (p. 6)
predators	animals that hunt and eat other animals (p. 9)
rotation	spinning (p. 6)
spring tides	the greatest tides of the month that happen when the sun and moon line up (p. 6)
substrate	the material that tide pools animals attach themselves to or live in; usually rocks or sand (p. 8)

Name _____

INSTRUCTIONS: Write the main idea and important details for each of the sections listed on the chart. Then choose one section and write a short summary about it that includes the main idea and details.

Main Idea	Details
The Intertidal Zone	
Drying Out	
Eating and Being Eaten	
My summary of: _____	

Name _____

INSTRUCTIONS: Read each sentence and add commas between the items that are in a list.

1. Tide pools are usually found on steep rocky or gravelly shores.
2. Anemones coral barnacles and jellyfish all visit tide pools.
3. Invertebrates usually have soft bodies no backbones and bony structures on the outside of their bodies.
4. The sun moon and Earth's rotations affect the tides.
5. Crustaceans include shrimp crabs and lobsters.
6. Tide pool animals have to deal with the water rushing in and out of their homes the drying effect of the sun and air and predators looking for an easy meal.
7. When exploring tide pools, look for the highest and lowest tides a rocky shoreline and a safe area.



Name _____

INSTRUCTIONS: In the first section, create a compound word by joining the two smaller words. In the second section, underline the compound word in each sentence. In the blanks, write the two words that make up each compound word.

1. star + fish = _____

2. sea + shore = _____

3. jelly + fish = _____

4. shell + fish = _____

5. sea + weed = _____

6. sun + light = _____

7. whirl + pool = _____

8. sun + rise = _____

9. water + fall = _____

10. sea + horse = _____

1. A seagull eats oysters, mussels, and fish.

_____ + _____

2. Algae are plant-like organisms.

_____ + _____

3. Newspapers publish the times of tides.

_____ + _____

4. A clam has a two-sided shell.

_____ + _____

5. Some tide pool animals have no backbones.

_____ + _____



An Apple a Day

A Reading A-Z Level R Leveled Reader

Word Count: 1,072




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An Apple a Day



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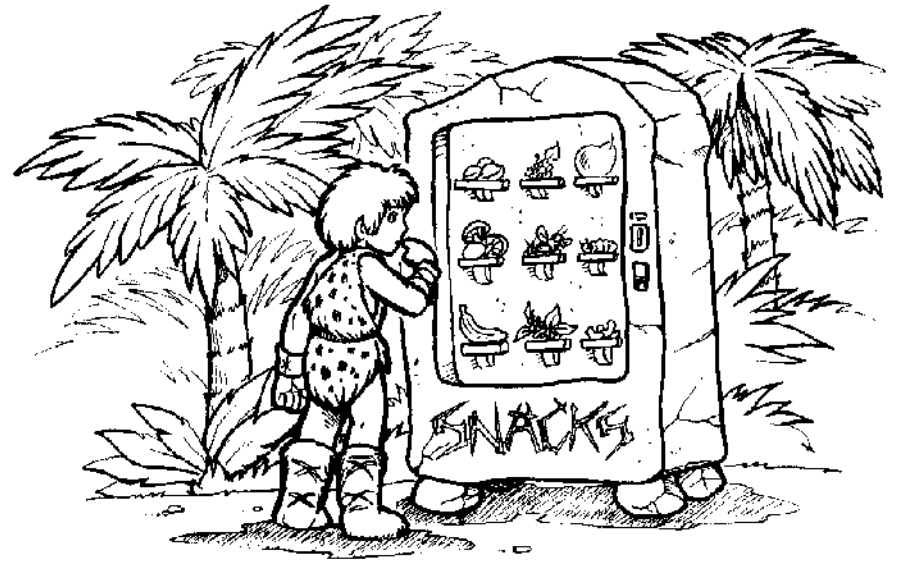
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A Snack, Anyone?

If you lived in **prehistoric** times, a snack might have meant nuts and seeds that you found in the forest. You might have picked wild berries and mushrooms. You might even have found a tasty insect to munch on.

Now, you go to the cupboard, refrigerator, or even a vending machine for a snack. You can select from fruit, bread, cheese, or even soda and candy. Because there are so many choices, the study of food—**nutrition**—is more important than ever.

Try This!

**How many meals
might you eat in your life?**

- ❶ Use a calculator.
- ❷ Multiply:
3 meals a day
times
365 days a year
times
90 years

Wow! That's a lot!



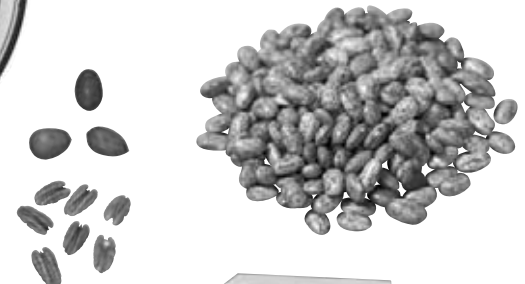
Nutrients

A **nutrient** is any substance your body needs to live, stay healthy, and grow. All of the nutrients you need come from the foods you eat and liquids you drink. This is why it is very important to eat foods that contain the right kinds of nutrients. On the next few pages, you will find out about different kinds of nutrients, what they do for your body, and what foods you can eat to get them.

What Is a Protein?

Proteins make up the building blocks of your body, helping build and repair cells. Proteins are especially important for strong muscles. Foods that contain

protein include
meat, fish,
eggs, dairy products,
beans, nuts, and
some grains.



What Is a Carbohydrate?

Carbohydrates are the nutrients your body uses to make energy. Some carbohydrates are especially good for you because they give you energy over a long period of time. These are found in foods such as vegetables, many fruits, oatmeal, whole grains, and whole-grain bread. Other carbohydrates, called sugars, create an energy flood followed by an energy crash, which is stressful to your body. These not-so-good carbohydrates include the sweet sugars in candy and the starches in cakes, cookies, white potatoes, bagels, and many breads.



Do You Know?

Type 2 diabetes is a disease caused by too much sugar in the blood. Your body works to move sugars from your blood into your cells, where the sugars turn to energy. Poor eating habits, including eating too many sweets, can increase your risk of diabetes. In some countries, including the United States, type 2 diabetes is increasing at an alarming rate.



What Is a Fat?

Another nutrient your body needs is **fat**. Fats have gotten a bad rap, but they are essential for building cells, absorbing certain **vitamins**, and storing extra energy. Fats occur as animal fats in meat and cheese, and vegetable fats in olive oil, nuts, and seeds.

Some fats are better for you than others. Vegetable fats from nuts and seeds are better than animal fats from meat and butter. Fats called trans fats are processed fats in pre-made foods such as snacks, cheese products, fried foods, and desserts. They are often called “hydrogenated” or “partially hydrogenated” oils. Studies have shown that these fats are not good for the body.



French fries often are cooked with trans fats.

Vitamins, Minerals, and Water

Other nutrients include special chemicals called vitamins. Vitamins help control how your cells use energy, and they help your body build the chemicals it needs to see, digest food, and fight diseases.



Vitamin
supplements

Your body needs nutrients called **minerals** to help your bones, blood, and other parts grow and function. Minerals also help your brain and nerves send signals to your body. Many people get the vitamins and minerals they need from pills called **supplements**.

Water is also essential for life. It helps you digest food by carrying nutrients to all the cells in your body.



Taking water breaks during a long hike is a good idea.

It is found in many foods, such as fruits, vegetables, meats, and even bread. But you should also drink six to eight glasses of water each day.

Calories

A **calorie** is a bit of energy that you get from food. High-calorie foods can give you lots of energy. But if you eat more calories than your body burns, you will store those calories as body fat. If you eat more calories than you burn over a long time, you will gain an unhealthy amount of weight.

There is a way to keep your body at the proper weight. Balance the calories you eat with the calories you burn through exercise. Desserts usually have lots of calories. So can you have a piece of birthday cake at a friend's party? Of course! But balance it out with an active game of hopscotch.



High-calorie food (left) can be balanced with exercise (right).

How Many Calories Do You Use?

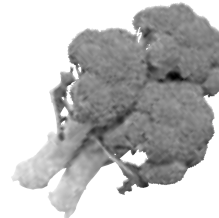


Smart Eating

There are many different opinions about what foods people should eat to be healthy. But many people agree that certain foods are good for your health, and other foods are not as good. Every day, be sure to eat protein, complex



carbohydrates, healthy fats, and lots of colorful vegetables and fruit. As the old saying goes, an "apple a day" is a good way to stay healthy.



Get to know which kinds of foods you enjoy from each of these groups. Try different kinds of proteins, grains, vegetables, and fruits to learn which ones you like best. And remember that many snack foods that are ready to eat from a bag or box are probably not healthy choices.



PROTEIN

Eat more: fish, chicken, turkey, eggs, lean meat (without much fat), low-fat dairy

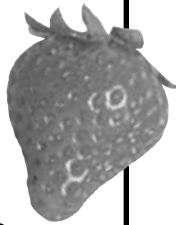
Eat less: meat with lots of fat or with breading; fried and deep-fried meats; highly processed meats like lunchmeat; high-fat dairy



CARBOHYDRATES

Eat more: colorful vegetables and fruit, oatmeal, brown rice, whole grains, whole-grain bread, whole-grain pasta

Eat less: sugar, white bread, cakes, white potatoes, white flour pasta



FATS

Eat more: nuts, most vegetable oils, fish oil

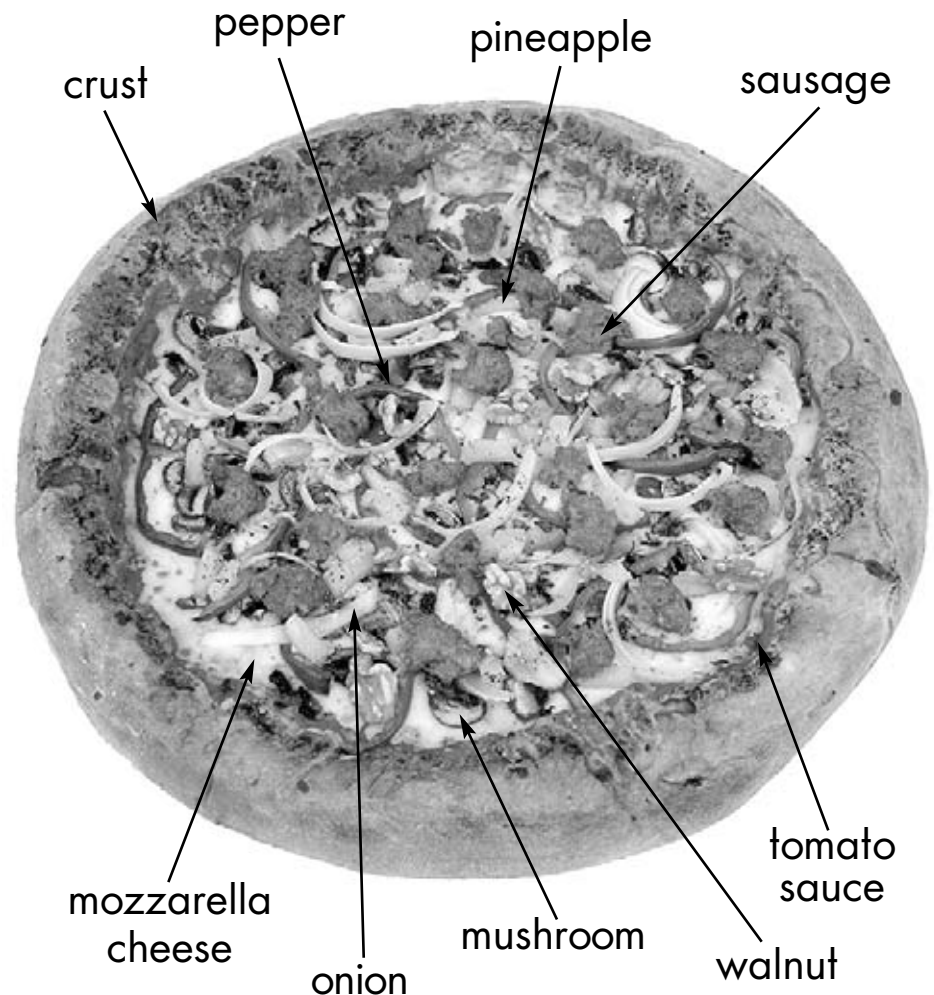
Eat less: saturated fat (the fat in meat and dairy products)

Avoid: trans fats (found in processed foods)



WATER

Drink a lot!



Some recipes contain foods from each of the main food groups. Can you match each food above to the right group?

Mmmm . . . tasty!

Nutrition Facts

Look at a box of cereal, a granola bar wrapper, or a bottle of juice. You will probably see a chart like the one below called the nutrition facts. The nutrition facts tell you what kinds of nutrients are in the food.

The first lines of the nutrition facts tell you the serving size, or how much of the food you should eat at one meal or snack. It might surprise you to see that a container, such as a bag of chips or bottle of soda, contains two or more servings. When you eat or drink the whole container, you are getting two servings, with double the calories and nutrients.

How many grams of fat does this tomato sauce have?



Nutrition Facts	
Serving Size 1/2 cup (125g)	
Servings Per Container about 6	
Amount Per Serving	
Calories 70	
Calories from Fat 10	
% Daily Value*	
Total Fat 1g	2%
Saturated Fat 0g	0%
Cholesterol 0mg	0%
Sodium 550mg	23%
Total Carb. 14g	5%
Dietary Fiber 2g	7%
Sugars 8g	
Protein 2g	
Vitamin A 20% • Vitamin C 8%	
Calcium 2% • Iron 6%	
*Percent Daily Values are based on a 2,000 calorie diet.	

Nutrition facts

Most nutrition facts also list all of the ingredients in order from most to least. For instance, this jar of sauce is made mostly of tomato puree and tomatoes, and has just a little lemon juice.

The calories are listed below the serving size. This jar of sauce has 70 calories in one serving.

The nutrients are listed under the heading "Amount Per Serving." The nutrition facts divide fats into saturated and unsaturated, and they divide carbohydrates into sugars and fibers. Saturated fats and sugars are less healthy than unsaturated fats and fibers.

INGREDIENTS: TOMATO PUREE*, TOMATOES*, BELL PEPPERS*, ONIONS*, CARROTS*, GARLIC* & ROASTED GARLIC*, EVAPORATED CANE JUICE*, ZUCCHINI*, SEA SALT, EXTRA VIRGIN OLIVE OIL*, HERBS*, LEMON JUICE CONCENTRATE*, SPICES*.

***CERTIFIED ORGANIC**

Excellent source of Vitamin A
No Saturated Fat
Cholesterol Free

List of ingredients

It's a Choice!

Right now, the caring adults in your life make many of your food choices. Your parents may prepare your breakfast and dinner. You may eat lunch in the school cafeteria. Even your soccer coach or your scout leader may provide refreshments for your practices and meetings.



Adults can help you plan meals and snacks.



Food, water, and exercise: keys to good health.

As you get older, you will have more and more chances to select what you eat. Knowing about the types of nutrients will help you stay healthy. You will also need to think about calories. Begin to follow healthy habits now. Eat well, exercise, and drink plenty of water. Keep a happy, positive attitude. It's a choice!

Try This!

Smart Eating

You can use the Smart Eating section of this book to plan your meals for a day. Be sure to include healthy foods from each of the three main food groups. If you eat something from a not-so-good list, try to eat something healthy at the same meal, or have another meal during the day that includes healthier foods. And remember to eat a good breakfast each morning. You'll have energy all day, and you'll do better in school.

Breakfast _____

Morning Snack _____

Lunch _____

Afternoon Snack _____

Dinner _____

Bedtime Snack _____

Glossary

calorie	unit that measures how much energy is in food (p. 10)
carbohydrates	nutrients your body uses as fuel (p. 7)
fat	nutrient your body uses as fuel, building material, and to store extra calories (p. 8)
minerals	chemicals your body uses for many purposes; your body only needs small amounts of minerals (p. 9)
nutrient	any substance your body needs to live, stay healthy, and grow (p. 5)
nutrition	the study of foods and how your body uses them (p. 4)
prehistoric	before recorded or written history (p. 4)
proteins	nutrients your body uses as building material and fuel (p. 6)
supplements	non-food substances that provide nutrients (p. 9)
vitamins	chemicals your body uses to maintain health (p. 8)

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carbohydrates, 7, 12, 13, 16	proteins, 6, 12, 13
fats, 8, 12, 13, 16	sugar(s), 7, 13, 16
minerals, 9	vitamins, 8, 9

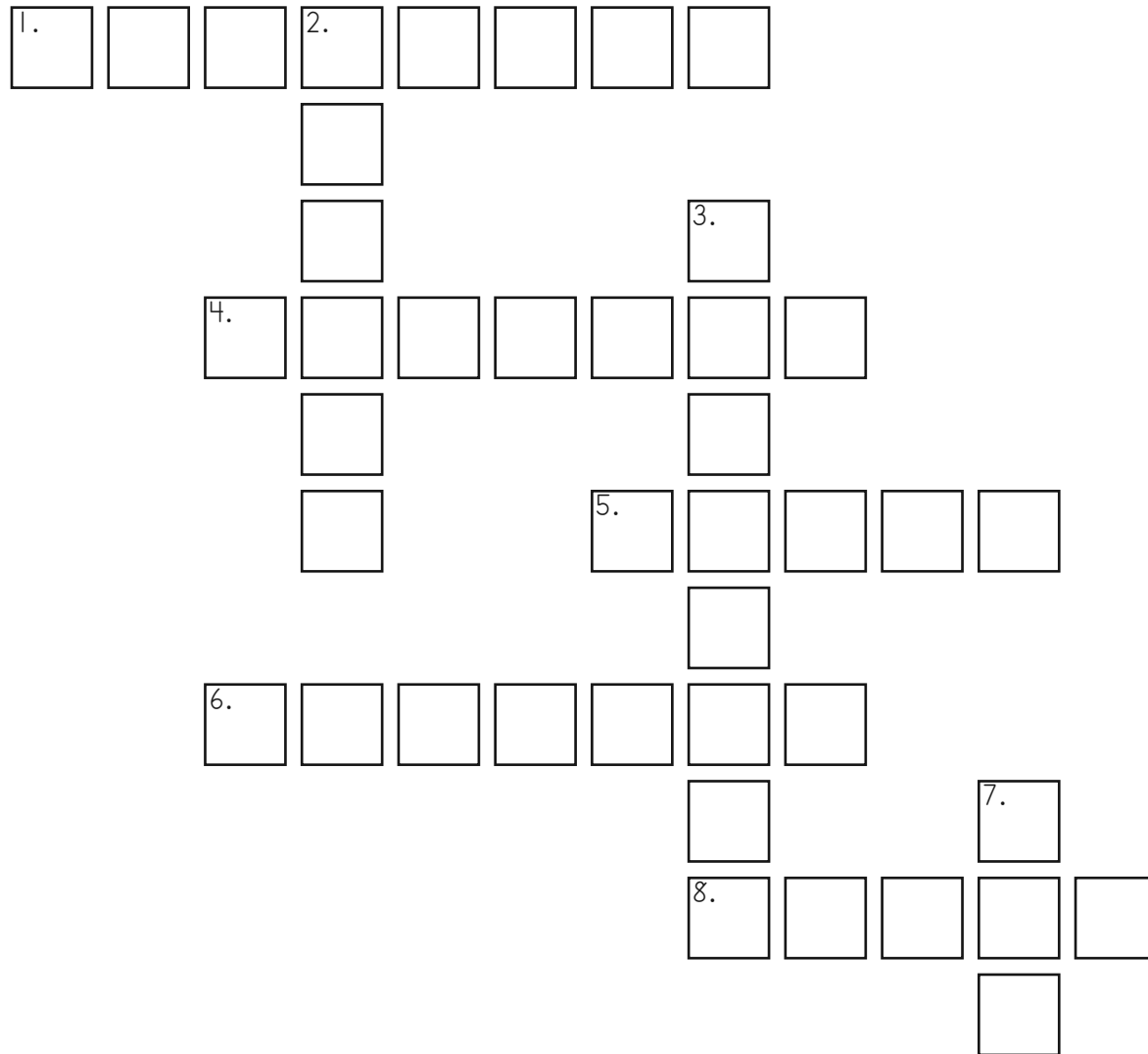
Name _____

INSTRUCTIONS: Before you read the book, write what you know about nutrition in the first column. Then write what you would like to know about nutrition in the second column. When you finish reading the book, write what you learned in the third column.

What I KNOW	What I WANT to Know	What I LEARNED

Name _____

INSTRUCTIONS: Use vocabulary from the book to complete the crossword puzzle.



1. These help your bones, blood, brain, and nerves.
2. This comes from calories.
3. These help control how your cells use energy.
4. This helps you have strong muscles.
5. This helps carry nutrients to all the cells in your body.
6. This is a unit of heat or energy in food.
7. This can be found in meat, cheese, olive oil, nuts, and seeds.
8. This is a type of simple carbohydrate.

Storm Chasers

A Reading A-Z Level R Leveled Reader

Word Count: 1,176



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STORM CHASERS



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Storm chasers film a funnel cloud.

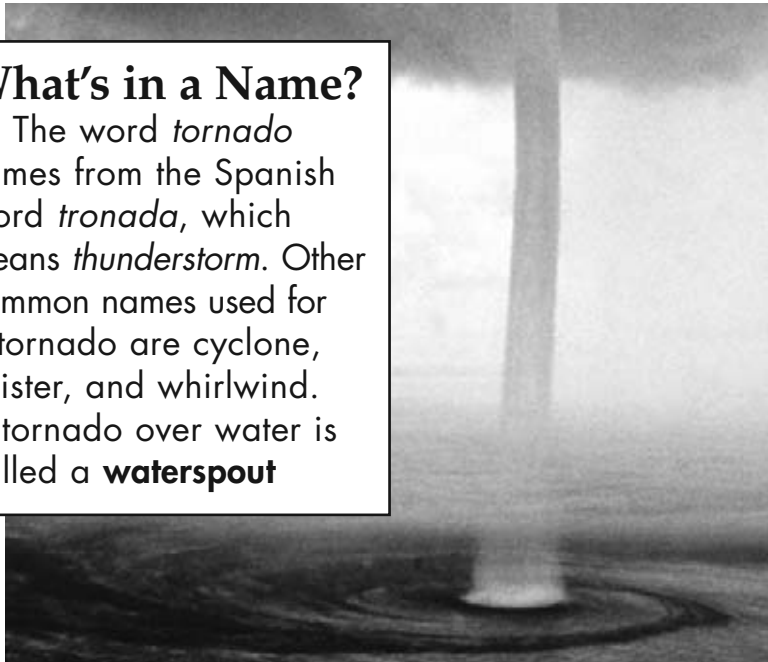
CHASING THE WIND

What kind of person chases a storm? Most people run for cover when the weather turns nasty. But for storm chasers, high winds, **funnel clouds**, and lightning are part of the job.

Some storm chasers are filmmakers and photographers trying to capture spectacular images of a tornado. But most storm chasers are scientists and **meteorologists** who study the weather. They put themselves in the paths of tornadoes to collect information that will help them better predict tornadoes and save lives. Their job is dangerous and may seem thrilling, but being out in severe weather makes storm chasers extra careful.

What's in a Name?

The word *tornado* comes from the Spanish word *tronada*, which means *thunderstorm*. Other common names used for a tornado are cyclone, twister, and whirlwind. A tornado over water is called a **waterspout**



A waterspout forming over water.

Every year, hundreds of tornadoes rip through the central part of the United States. They can flip over cars, tear roofs off houses, and destroy crops. Most tornado winds blow about 160 kilometers per hour (100 miles per hour). The strongest tornadoes, sometimes called super tornadoes, have wind speeds of 402 kph to more than 482 kph (250–300 mph). A super tornado destroys everything in its path. Less than two percent of all tornadoes have winds of more than 322 kph (200 mph).



TORNADO ALLEY

More than 800 tornadoes a year touch down in the United States, and more than half of Earth's tornadoes hit the central section of the United States called "**Tornado Alley**." Some of the states in Tornado Alley are: Iowa, Nebraska, Colorado, Kansas, Oklahoma, and Texas. Most storm chasing happens in these states—in the spring in the southern states of the Great Plains, and in the late summer in the northern states.



The states of Tornado Alley



Tornado devastation in Illinois in 1925

Every state in the United States has experienced a tornado! They just tend to be stronger and more frequent in the central part of the country. Texas has the most recorded tornado touchdowns of any state.

On March 8, 1925, one of the worst tornadoes in U.S. history ripped through Missouri, Illinois, and Indiana. The tornado traveled on the ground for 352 kilometers (219 miles) and lasted three and a half hours. More than 600 people died in that tornado, and 10,000 people lost their homes.



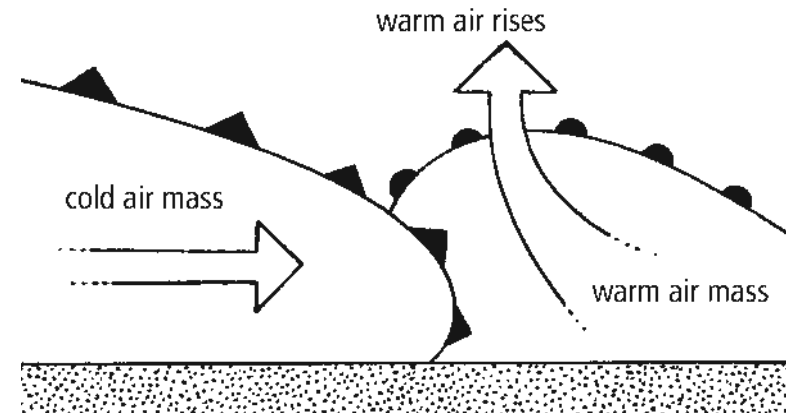
TORNADO WEATHER

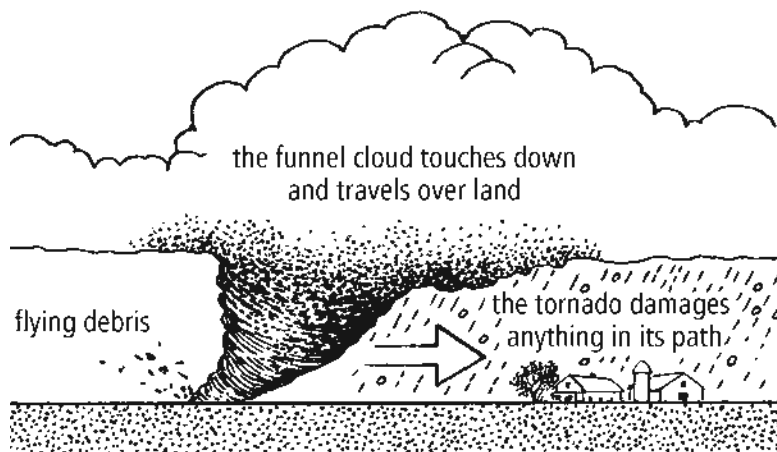
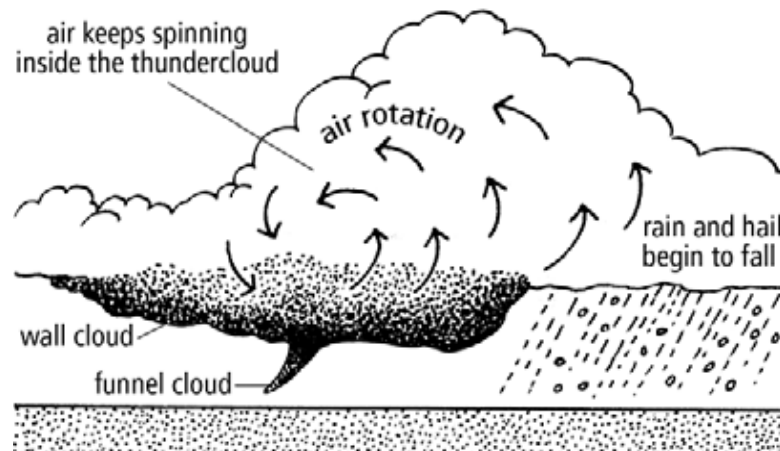
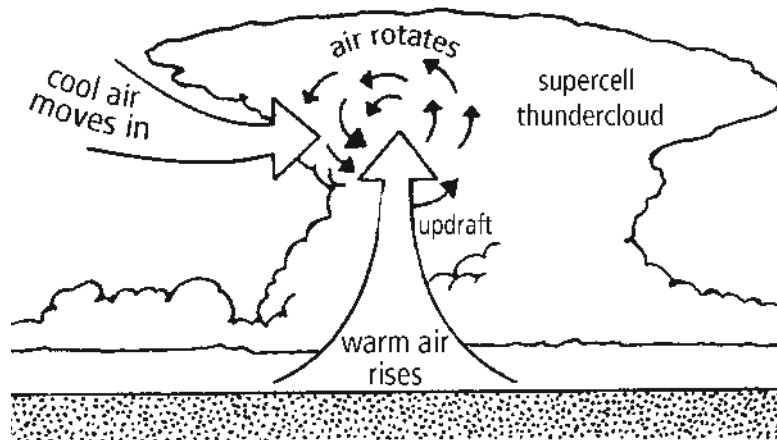
Meteorologists have studied tornadoes by observing them and collecting data, but they still have much to learn. They know about most of the weather conditions needed to form a tornado. But they still do not know why some funnel clouds touch down, becoming tornadoes, and others do not.

The recipe for a tornado includes:

- warm moist air near the ground
- cool dry air above the ground
- a cold air mass colliding with a warm air mass.

These diagrams explain how a tornado forms.





Watch or Warning?

A **tornado watch** means that conditions are right for a tornado. Listen to the radio or watch the television for updates on weather conditions.

A **tornado warning** means that a tornado has been spotted nearby. Get inside immediately.



CAN YOU PREDICT A TORNADO?

You can't always tell when a tornado might strike, but there are some clues. Sometimes you can see funnel clouds in the sky before they touch the ground. At other times you can see certain cloud formations, called **wall clouds**, which precede severe storms, but not all severe storms produce tornadoes.

Storm chasers are gaining more knowledge with the data they collect from each tornado, but meteorologists still can't predict tornadoes the way they can predict how sunny or rainy it will be in five to seven days. However, meteorologists can tell us when conditions are right for a tornado. Then they can issue a tornado watch.

TORNADO SAFETY

Here are a few things to keep in mind:

- Get inside a house or a building.
- Go to a basement. If a basement isn't available, go to the lowest floor in your house or building. Go into a hallway or an interior room.
- Stay away from windows.
- Get under a desk or table, or another sturdy piece of furniture.
- If you're outside and can't get safely indoors, find the closest low area, such as a ditch, and cover your head with your arms and hands to protect yourself.



Storm shelter in Alabama mobile home park



Meteorologists look at Doppler radar to track storm activity.

Meteorologists use **Doppler radar** to track weather conditions. Doppler radar helps them determine the wind direction and find early signs of rapidly rotating air inside thunderstorms. It also helps them determine precise wind directions. Meteorologists can give people about 20 minutes' warning for a tornado. Twenty minutes may not sound like much, but an advance warning can save lives.

Scientists can learn how severe a storm is by studying Doppler radar. They can also pinpoint the exact location of the storm and how long it will last. On average, tornadoes last 10 minutes, but they can last only seconds or stretch on for hours.

Tornadoes are measured by F-scale ratings. The scale is named for Theodore Fujita, a scientist who invented a method for measuring tornadoes.

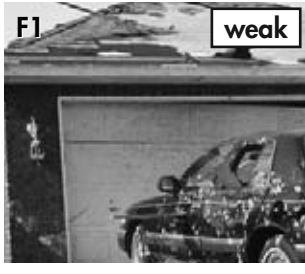
The **F-ratings** are based on how much destruction a tornado caused. An F0 or F1 tornado is weak. But an F5 tornado is a monster with winds reaching speeds of 420 kph to 512 kph (261–318 mph). To give a tornado an F-scale rating, an expert looks at the damage after the tornado hits. The F-scale rating of a tornado can't really be predicted accurately ahead of the twister—only after it has hit.



People look over the damage caused by a tornado.



TORNADO DEVASTATION

F-scale	Class	Wind Speed Estimate Description
	F0 weak	64–116 kph (40–72 mph) Broken branches
	F1 weak	117–180 kph (73–112 mph) Trees snapped, shingles and other roof surfaces removed
	F2 strong	181–253 kph (113–157 mph) Large trees uprooted
	F3 strong	254–332 kph (158–206 mph) Cars overturned; roofs and walls of houses torn off

F-scale	Class	Wind Speed Estimate Description
---------	-------	------------------------------------



333–419 kph
(207–260 mph)
Houses leveled;
cars tossed around



420–512 kph
(261–318 mph)
Houses torn off
foundations; large
objects tossed
hundreds of feet

Best Guess

The wind speeds in the Fujita scale have never been scientifically verified in real tornadoes because:

1. Nobody knows the “true” wind speeds at ground level in most tornadoes because it’s hard to get close enough to measure them.
2. The amount of wind needed to create similar-looking damage can vary greatly from one building to the next.



STORM CHASERS ON THE JOB

Storm chasers have to be able to interpret radar reports to find tornadoes to study. They look at weather data as storms form to locate a storm that might produce a tornado. Making an educated guess and relying on other storm chasers with more experience can place them five miles away from a tornado when it hits instead of 50 miles away. Being close means they’ll be able to collect the data they need to make better predictions.



Do You Know?

The National Weather Service also relies on ordinary people to watch for tornadoes. In Tornado Alley, local police and emergency personnel are trained to spot tornadoes.



Storm chaser Warren Faidley records a tornado in the distance.

A storm chaser's job can seem like a "hurry up and wait" game. Professional storm chasers spend about 10 days "hunting" storms for every minute they spend actually watching, collecting data, or filming a tornado.

Warren Faidley is a well-known storm chaser, photographer, and filmmaker. He says he sometimes has gone an entire year without seeing a tornado. When he does spot one, he wants to get the best possible pictures. But he also needs to stay a safe distance away. Winds that top 322 to 483 kph (200–300 mph) can toss cars around like toys. The trick for a storm chaser is to know when to get out of the area and how to predict a tornado's path.



The American Red Cross helps people left homeless by natural disasters, such as fires and tornadoes.

Storm chasers take their jobs seriously and believe they have an important mission. They now know that winds close to the earth may have a bigger role in forming a tornado than they previously thought. They know that the smaller the eye, or center, of the tornado, the faster it spins. But there is still so much to learn, and storm chasers work hard to collect more data to help all of us know more about the whirling storms that can destroy lives and rip apart entire towns in just a few minutes.

GLOSSARY

Doppler radar (<i>n.</i>)	sophisticated radar system that measures velocity (p. 12)
F-ratings (<i>n.</i>)	numbers that tell how destructive and dangerous a tornado is (p. 13)
funnel clouds (<i>n.</i>)	funnel-shaped cloud under the bottom of a thundercloud; often means a tornado might form (p. 4)
meteorologists (<i>n.</i>)	people who specialize in studying the earth's atmosphere, climate, and weather (p. 4)
supercell (<i>n.</i>)	a rotating thundercloud that reaches high into the sky and often produces tornadoes (p. 9)
Tornado Alley (<i>n.</i>)	an unofficial name given to an area in the central United States where tornadoes frequently touch down (p. 6)
tornado warning (<i>n.</i>)	alert given when a tornado has been spotted nearby (p. 10)
tornado watch (<i>n.</i>)	when conditions are right for a tornado (p. 10)
wall clouds (<i>n.</i>)	smaller clouds that produce little rain, if any, underneath the main cloud of a supercell (p. 9)
waterspout (<i>n.</i>)	a tornado over water (p. 5)



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Name _____

INSTRUCTIONS: Use the book to identify and fill in the organizer with the main ideas and supporting details in each chapter.

Storm Chasers

Chapter	Main Idea	Details
Can You Predict a Tornado?		
Tornado Devastation		
Storm Chasers on the Job		

Name _____

INSTRUCTIONS: Cut out the word cards. Rearrange the cards and add the suffixes to make new words.
Write the new words on the inside back cover of *Storm Chasers*. (Hint: The spelling of two words must change before a suffix can be added.)

-ist

-ful

violin

wish

motor

art

cheer

guitar

harm

biology

help

type

Bessie Coleman

A Reading A-Z Level R Leveled Reader

Word Count: 1,321



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Bessie Coleman



Written by Jane Sellman

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Bessie Coleman

Introduction

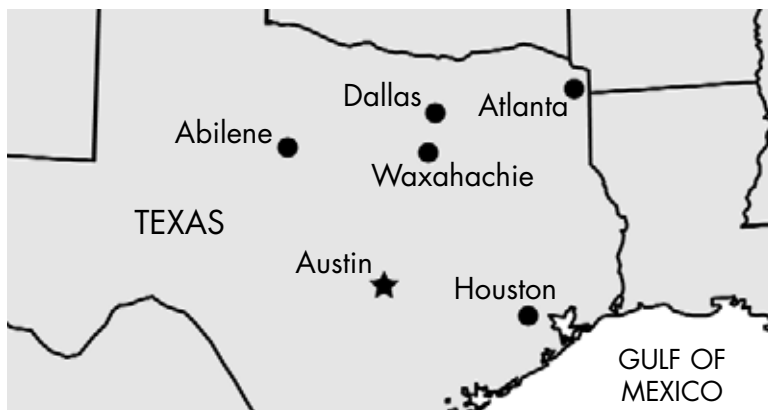
In the United States in the 1920s, few women flew planes, and it was unthinkable that an African-American woman could fly. Yet Bessie Coleman did just that. Bessie was a brave African-American woman who fought discrimination to follow her dream of becoming a pilot. Her determination opened doors for other African-Americans and women who came after her.

Growing Up In Texas



Bessie Coleman was born in Atlanta, Texas, in 1892. Her mother was African-American and her father was of African-American and Choctaw Native American descent. Her parents were **sharecroppers**. Bessie was one of thirteen children.

Two years after Bessie's birth, the family moved to Waxahachie (WAK-sah-HACH-ee), Texas, where Bessie's father hoped that the busy town would offer good jobs. Bessie started school in Waxahachie. She had to walk miles each day to an all-black school. She loved reading and books, and she was a whiz at math.



Waxahachie, where Bessie grew up, is close to Dallas.

Bessie's father was disturbed by the racial barriers in Texas. He believed that the family would be treated better if they moved to Indian Territory in what is now Oklahoma. Unable to convince his wife to accompany him, Bessie's father left the family when Bessie was nine years old. Around that time, Bessie's older brothers grew up and also moved away. Bessie's mother worked as a maid, while Bessie helped take care of her younger sisters.



Waxahachie courthouse between 1911 and 1919



Workers pick cotton. Inset: cotton boll

In Texas, cotton growing was big business. During the cotton harvest, everyone in the family worked in the fields for extra money. Bessie hated picking cotton. It was hot, boring work, and during the harvest, African-American children couldn't go to school. Even though she worked in the fields, Bessie managed to finish all eight grades in the local school. She decided that she wanted to go to college, so she got a job washing people's clothes to save money. In about four years, she had enough to begin school. She enrolled in a college for African-Americans, but after one year she ran out of money and had to return home.

Moving To Chicago



Two of Bessie's brothers had traveled east to Chicago, Illinois, in search of work and a better life. One day, one of her brothers, Walter, contacted Bessie. He thought she could get a good job in the big city.

At the age of 23, Bessie boarded a train and made the trip to Chicago. It was a long and uncomfortable trip. African-Americans were forced to sit on hard wooden benches in a separate part of the train from white people.



Chicago 1919



Do You Know?

In Chicago in the beginning of the 20th century, most African American people had to live in separate neighborhoods from white people. In the Southside neighborhoods, African-Americans owned all the businesses. They had barbershops, like the one where Bessie worked, and stores, restaurants, banks, and nightclubs. Many became wealthy.

When Bessie arrived in Chicago, she moved in with her brothers, Walter and John, and their wives, making five people in one small apartment. Bessie took a class to learn to become a **manicurist**, and soon she found a job at the White Sox Barbershop on Chicago's Southside.

When America entered World War I, John and Walter **enlisted** in the army and went to France to fight. Bessie read newspaper stories



Eugene Bullard

about the fighting in Europe and worried about her brothers' safety. She also read about the brave pilots and was especially inspired by one, Eugene Bullard, an African-American who flew for the French.

When her brothers returned, they told Bessie stories about the war. John teased her, saying that French women were braver than American women, and that they could fly airplanes. Hearing stories about the brave pilots made Bessie realize what she wanted to do. She wanted to become a pilot. But who would teach her? No one she asked would teach a black woman to fly.

Traveling To France



Bessie did not give up. Her friend Robert Abbott, the editor of a newspaper for black people, told her that she could go to France to learn to fly. Bessie would need a lot of money to pay for the trip and the lessons. She got a new job managing a restaurant and saved her money. She also took French lessons and quickly learned the language. Robert Abbott and other friends helped her pay for the trip as well.

In 1920, Bessie traveled on a ship to France. She was pleased to find that there was no discrimination against African-Americans in France. She could eat in any restaurant and ride wherever she wished on the trains.



Bessie at flight school in France

Bessie found a school run by two brothers named Caudron, who said they would teach her to fly. The training plane they used was called a **biplane**. It had two pairs of wings and two open cockpits. The instructor sat in the front cockpit, and Bessie sat in the rear cockpit, watching as he moved the controls. It was very difficult to hear her teacher's instructions over the roar of the wind and the engine. Bessie was a good student, and in a few months she was ready to fly **solo**.

In 1921, at the age of 29, Bessie became the first African-American female pilot. She also became the first African-American to earn an international pilot's license.



Do You Know?

Early planes had extremely simple controls. A stick, like a joystick, controlled the plane's up-and-down movement. A rudder bar on the floor controlled the side-to-side movement. Pilots pushed the rudder bar back and forth with their feet.

Above: Bessie's pilots license.



A plane performs a stunt at a modern air show.

Triumphant Return



In the fall of 1921, Bessie returned to America. Both black and white Americans learned of Bessie's accomplishment. She was interviewed by reporters and invited to special events. She was greeted with applause and respect.

Bessie's dreams did not end with becoming a pilot. She wanted to start a flying school for others, especially African-Americans. But she would need money to start the school, and the best way for a pilot to make money was to perform at air shows.



Bessie in her flying suit

Do You Know?

During the 1920s, few people had ever seen an airplane, and even fewer had been in one. Airplanes were small and dangerous, so people did not travel in them. Most planes were used for only two things: fighting battles and air shows. Air shows were one of the biggest and most exciting events of the time.

Before Bessie could be a part of an air show, she had to return to France to learn more about flying, including stunts and tricks. When Bessie came back to the United States, Robert Abbott helped her organize an air show in Chicago on September 3, 1922. It was the first time a black woman had ever given an air show.

Barnstormer



Bessie's reputation as a pilot spread across the country. She became a **barnstormer**, a pilot who traveled around the country using farmers' fields for air shows.

Bessie's act pleased crowds wherever she performed. One of her stunts was the **loop-the-loop**, where Bessie would fly her plane straight up in the air, turn upside down, and make large loops in the sky.



A pilot's view in a loop-the-loop stunt

Parachuting from a plane was another of Bessie's famous stunts. She also took people for rides in her plane. She gave many black people their first chance to fly.

Bessie took other steps to help put an end to discrimination. She insisted that everyone, blacks and whites, males and females, should be allowed to attend any of the events in which she participated. She would not give a show or a speech to a white-only crowd.



Bessie used early versions of parachutes like this one when jumping from planes.

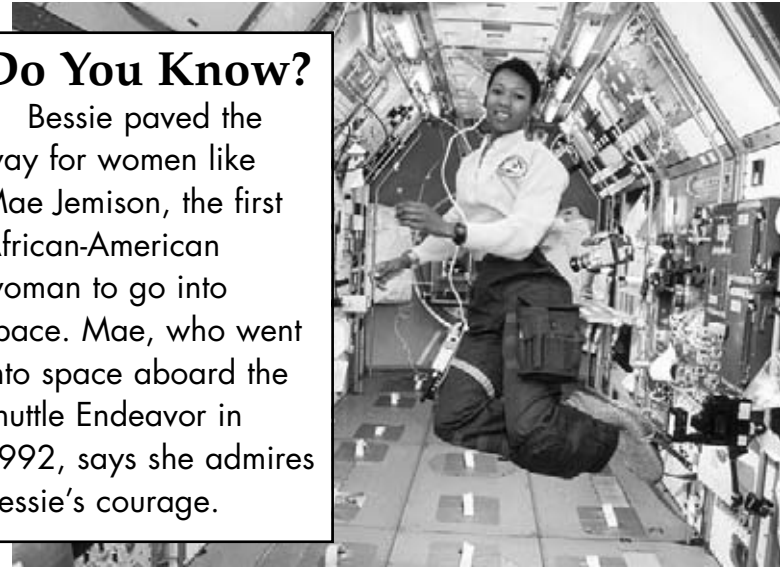


Curtiss Jenny airplane

At first, Bessie had to borrow a plane for her shows. In time, Bessie had enough money to buy her own plane, a **Curtiss Jenny**. Shortly after she bought the plane, its engine jammed, and she crashed. Bessie had a broken leg, broken ribs, and numerous cuts. She was in the hospital for three months. As soon as she was released, Bessie went right back to flying.

Do You Know?

Bessie paved the way for women like Mae Jemison, the first African-American woman to go into space. Mae, who went into space aboard the shuttle Endeavor in 1992, says she admires Bessie's courage.



In April of 1926, Bessie agreed to do a show in Jacksonville, Florida that included a parachute jump. She and her **mechanic**, William Wills, took the plane up to pick out a spot for the parachute jump.

Bessie didn't wear her seat belt because she needed to lean out of the plane to spot a good place for the jump. The plane suddenly went into a spin. Bessie fell out of the plane and was killed. The airplane crashed, and William Wills was killed, too. It was a sad day. The country had lost a true aviation pioneer and one of its favorite pilots.

Bessie's Legacy

After her death, the U.S. Post Office issued a stamp in her honor and a Chicago street was named after her. May 2nd has been declared Bessie Coleman Day in Chicago.



Issued in 1995

Three years after Bessie's death, one of her most important dreams was fulfilled. The Bessie Coleman Aero Club was opened in Chicago. It was the first flight school for African-Americans.

Glossary

barnstormer	a person who travels the country performing shows in rural areas, often on farms (p. 15)
biplane	a plane with two cockpits and two pairs of wings (p. 12)
Curtiss Jenny	a biplane model from the early 1900s (p. 17)
enlisted	signed up for; enrolled in (p. 10)
loop-the-loop	an airplane stunt in which the pilot flies straight up in the air, flips over, and flies straight down in a loop (p. 15)

manicurist	a person who takes care of and polishes fingernails (p. 9)
mechanic	a person who fixes machines, especially cars, planes, and other moving vehicles (p. 18)
sharecroppers	farmers who work on other farmers' land and share part of their crops or profits (p. 5)
solo	by one's self (p. 12)

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Name _____

INSTRUCTIONS: Write the major events of Bessie Coleman's life in order in the boxes below.

1.



2.



3.



4.



5.



6.



7.



8.



9.



10.

Name _____

INSTRUCTIONS: Write *simple subject* on the line if the sentence has only one subject. Write *compound subject* on the line if the sentence has more than one subject.

1. Bessie Coleman was born in Atlanta, Texas.

2. Bessie's mother and father moved the family to Waxahachie.

3. Her older brothers grew up and moved away.

4. The men and women worked very hard in the cotton fields.

5. African-American children couldn't go to school during harvest time.

6. She enrolled in a college for African-Americans.

7. John and Walter enlisted in the army and went to France to fight.

8. She traveled on a ship to France in 1920.

9. Bessie and William were killed when their airplane crashed.

10. The U.S. Post Office issued a stamp in her honor.

Name _____

INSTRUCTIONS: Write a word from the glossary or index in the word box. Below it, write the definition of the word. Write a synonym and antonym on either side of the word, then use the word in a sentence of your own.

Synonym	Word Box	Antonym
Definition		
Sentence		

BESSIE COLEMAN • LEVEL R • 3

Synonym	Word Box	Antonym
Definition		
Sentence		

SKILL: CONTENT VOCABULARY

Charlene's Sea of Cortez Journal

A Reading A-Z Level R Leveled Reader

Word Count: 1,500



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MONDAY: Los Islotes

My name is Charlene, and I am eight years old. This is my **journal**. I am going to write in it every day while I am on a cruise in Mexico's Sea of Cortez. Last night, we boarded the ship "Sea Bird" at La Paz. We met other passengers at dinner. After we went to bed, the ship left the **harbor** and sailed through the night. When we awoke this morning, we were near a small island called Los Islotes. We could hear a lot of noise coming from the island. There were many chattering birds and barking sea lions.



We had to have a safety drill before going to the island. The captain explained what we should do if there were an emergency. All of us had to practice putting on our life jackets. I met a nice boy called Petar, and he is 10 years old.



My new friend Petar in a life jacket

In order to get close to the island, we had to ride in **inflatable**, rubber boats. We were able to get very close to the sea lions. There were hundreds of them. Some were sleeping on the rocks while others played in the water. Then came the best part. We were allowed to snorkel and swim with the sea lions. They



A lazy sea lion

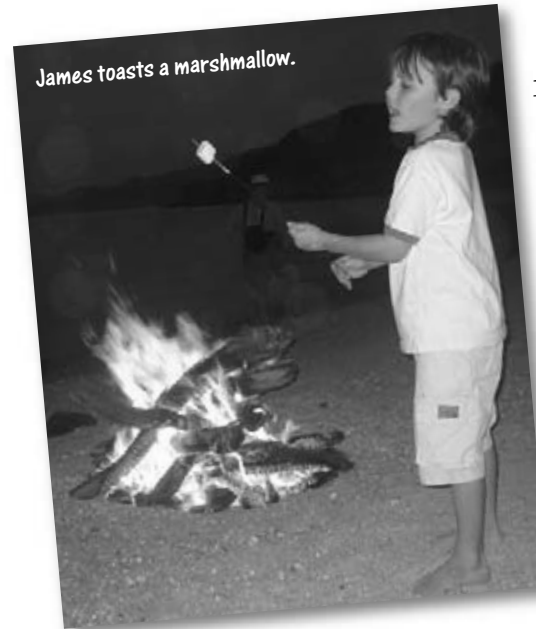
were very friendly and playful. I loved it when a young one swam up to me to say hello. It was a great day!

TUESDAY: Half Moon Bay

When I woke up this morning, I looked out of my cabin window. I saw a beautiful, white sandy beach. The sea was calm, clear, and blue. The sun was shining brightly. We had sailed to Half Moon Bay at **Isla** San Francisco. The ship's crew had been up early. They had taken a lot of **kayaks** to the beach for us to use after lunch. At lunch, I met two more kids near my age—James and Catherine, who are brother and sister. We were all excited about kayaking. After a quick boat trip, we were on the beach. We were given a brief kayak lesson, and then we picked out our kayaks. Some were for two people; others were single-seaters.



Catherine and her mom kayak near me and my dad.



James toasts a marshmallow.

I went with my dad in a two-seater. I sat in the front. Dad is very strong, so we were soon whizzing along on the top of the water. It was great, but my arms soon got tired. I left it to Dad to get us back. After kayaking, I played with Petar, James, and Catherine on the beach. We made a huge sand castle and had swimming races. In the evening, we had dinner on the beach. The crew built a bonfire, and we all gathered around. We ate hamburgers and fish tacos. Afterward, we toasted marshmallows on the bonfire to make s'mores. After everyone was full, we had a sing-along. A few people had brought guitars. They played popular songs and everyone joined in singing. It was a perfect end to a perfect day.

WEDNESDAY: Isla San Jose

When I awoke this morning, we hadn't stopped anywhere. We were still sailing. This was because we were on the lookout for whales. I learned there are many different types of whales in the Sea of Cortez. I hoped that we might see some of them. Later in the morning, we saw an island in the distance. It was Isla San Jose. We were going **ashore** there. The rocks on the island were a pretty orange color. There were **fossils** of shells in the rocks. We even saw a fossil of a turtle that had died thousands of years ago. We went on a long hike. I saw a big bug on a flower. I took this photo. The bug is called a tarantula wasp.



A tarantula wasp, how scary!



Violet-green swallow

I saw a bird repeatedly flying to a cactus. I quietly sat down to watch. The bird was feeding its babies. It had made a nest in a hole in the cactus.

When we got back to the ship, a surprise was waiting. The captain invited Petar, James, Catherine, and me to the ship's bridge. The captain showed us all the instruments and explained how they worked. He even let each of us steer the ship.

We were looking out for whales, but there were still no signs of any. I hope that we will be luckier tomorrow.

James steers the ship. I got to steer first!



THURSDAY: Dolphins

Breakfast this morning was interrupted by the captain letting us know that there were dolphins close by. Everyone left half-eaten cereal, eggs, and bacon and rushed out onto the deck. People were looking out to sea with their **binoculars** and cameras.



James didn't need binoculars when the dolphins got close to the ship.



Bottle-nosed dolphins, my favorite!

Soon there were hundreds of dolphins surrounding the ship. They seemed to be as curious about us as we were about them. The dolphins were very graceful. They swam so fast, and jumped out of the water as they sped along. Six or seven dolphins swam right in front of the ship. They seemed to enjoy being pushed along by the bow of the ship.

The marine **mammal** expert on the cruise told us that the dolphins were swimming rapidly together to round up fish to eat. There were many gulls and pelicans diving into the sea to catch fish disturbed by the dolphins. In the evening, we watched “Finding Nemo” on James’s portable DVD player. It couldn’t have been a better day!



Petar, James, and Catherine watch a DVD while I snap a photo.



Blue whales—one is underwater. You can almost see its shape in the background.

FRIDAY: Whales, Catalina Island

It happened today! We saw whales. We were cruising along when I saw a kind of fountain in the distance. “What’s that out there?” I asked one of the cruise’s sea animal experts. “It’s a whale’s spout,” he answered. “Great job. I’ll ask the captain to head for it.”

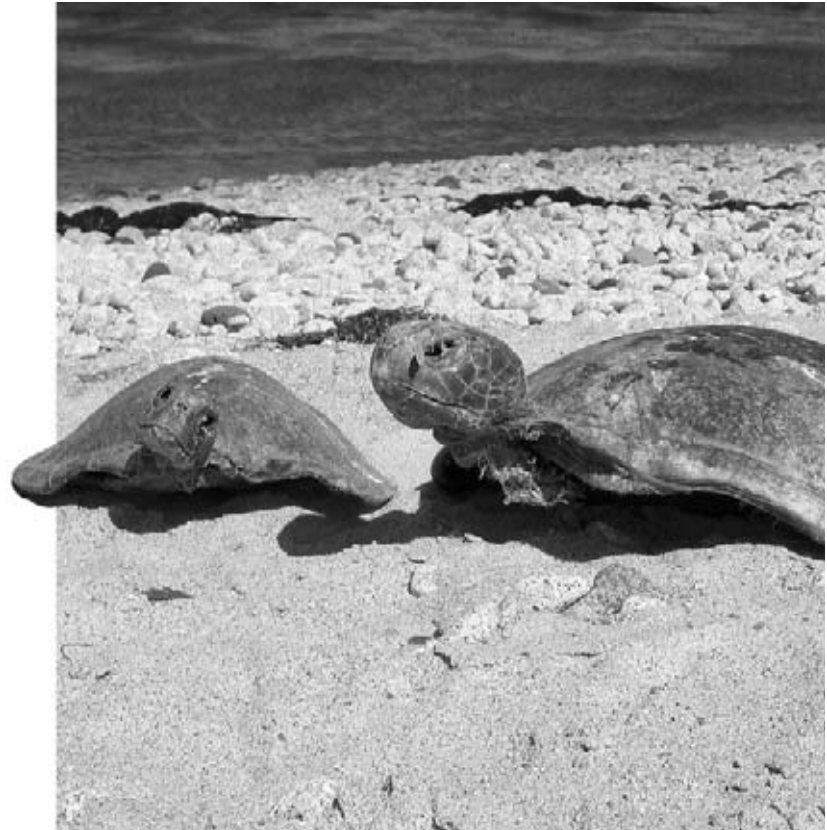
Soon we were next to the biggest creature on Earth—a blue whale. And not just one of them, but a pair.

They seemed happy to be swimming next to the ship. They were huge, over 80 feet long. It was very exciting to hear them breathe out of their blowholes.

One of them would dive down under water. We timed how long it stayed under. It was about eight minutes. We could then calculate when it would surface again. We had just enough time to run inside and get an ice cream cone before the whale surfaced again.



I'm glad I don't sound like this whale when I breathe.



The shells of these dead turtles almost look alive.

We watched the whales for a long time, but soon we had to leave them. We were going to Catalina Island. We landed on a pebbly beach at Catalina Island in the afternoon. Petar found the shells of some dead turtles. They were very creepy because their heads were still attached. They looked alive, but they didn't have any eyes.

SATURDAY: Santa Rosalia and La Rasa Island

I was woken up very early this morning. The sea was very rough, and the ship was tossing and turning on the big waves. It was a little scary, but Mom assured me that the ship was safe. At breakfast, everyone looked tired. The movement of the ship on the big waves was the reason that nobody had slept much. The sea was calmer when we pulled in to the harbor at Santa Rosalia. This small town was where the ship stopped to pick up supplies and fresh water. Santa Rosalia was once a mining town. Although there is no longer mining, there are lots of old deserted buildings and rusty equipment still around.



This used to be full of coal.
The coal was loaded onto old
steam ships for fuel.



Heermann's gull

In the afternoon, we sailed on and landed at Isla Rasa. Every spring, hundreds of thousands of seabirds nest on this island. We had arrived at the perfect time because the birds had just arrived on the island the day before.

The birds are mainly Heermann's gulls, elegant **terns**, and royal terns. The noise they make is deafening. We had to walk very carefully to make sure we didn't step on any nests or eggs.



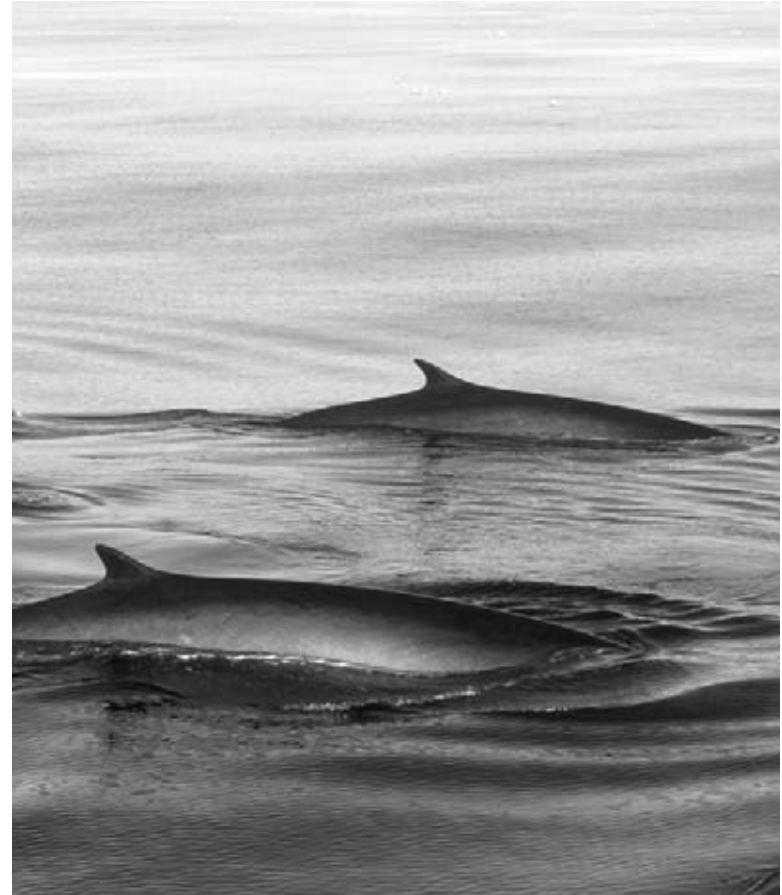
Elegant terns

SUNDAY: Bahia de Los Angeles, Boojum Forest

Today was our last day on the ship. I am writing this at the airport while waiting for the plane to take us home. This morning, we went ashore at Bahia de Los Angeles. There were buses waiting to take us to the **boojum** forest. I didn't know what a boojum was, but I soon found out. A boojum was a most peculiar tree. It looked like an upside down carrot, but was very, very tall. There were hundreds of these trees in the desert forest. We hiked for a mile or so into the boojum forest. I loved the boojums because I had never seen anything quite like them. The desert forest was the only place on Earth we could see them.



Boojum tree and James



Two fin whales swim near the ship to say goodbye.

In the afternoon, we sailed toward our last stop—Guaymas. On the way, we were very lucky because we saw many marine mammals. It was as if they had all come to say goodbye. We saw four fin whales swimming together. They are the second largest whales in the ocean.

A little while later, eight pilot whales swam along with the ship. They were very small. It was fun watching them jump out of the water. Finally, a friendly dolphin and a pelican stopped by to say farewell. This is the end of my cruise journal. I will always remember this wonderful vacation and the new friends that I have made.



Glossary

ashore	to be at the shore (p. 7)
binoculars	a hand-held device made up of two lenses for seeing things far away (p. 9)
boojum	a tree that looks like an upside-down carrot and only grows on the Baja California peninsula (p. 17)
fossils	the remains of plants and animals that turned to stone over time (p. 7)
harbor	a sheltered body of water near the shore (p. 3)
inflatable	something that is filled with air before use (p. 4)
isla	Spanish for “island” (p. 5)
journal	a written account of things that happen; like a diary (p. 3)
kayaks	small, light boats with a single or double opening in the center (p. 5)
mammal	a warm-blooded animal with a backbone that feeds its young milk (p. 11)
terns	seabirds that are smaller than gulls but in the same family (p. 16)

Name _____

INSTRUCTIONS: Visualize the important events on each day of Charlene's trip. Then draw what you pictured for each event under the appropriate day on the chart.

Monday		Tuesday		Wednesday		Thursday	
Friday		Saturday		Sunday			

Reading a-z

Who	Where
What	
When	Why

CHARLENE'S SEA OF CORTEZ JOURNAL • LEVEL R • 2

[illegible]

SKILL: SUMMARIZE

Name _____

INSTRUCTIONS: Identify whether each word in the box is a *regular* or *irregular* verb. Then write a sentence using each verb in the past tense. An example is provided.

go

regular

irregular

I went to the store.

allow

regular

irregular

love

regular

irregular

see

regular

irregular

take

regular

irregular

wake

regular

irregular

Name _____

INSTRUCTIONS: Write one sentence for each pair of homophones. Use each homophone once in the sentence. You may add suffixes such as *-ed*, *-s*, or *-ing* to the homophones in the sentence.

1. (where/wear) Where will you wear a hat like that?

2. (eight/ate) _____

3. (plane/plain) _____

4. (in/inn) _____

5. (flew/flu) _____

6. (red/read) _____

7. (cent/sent) _____

8. (knew/new) _____

9. (two/too) _____

10. (their/there) _____



We're in Business

A Reading A-Z Level R Leveled Reader

Word Count: 1,082

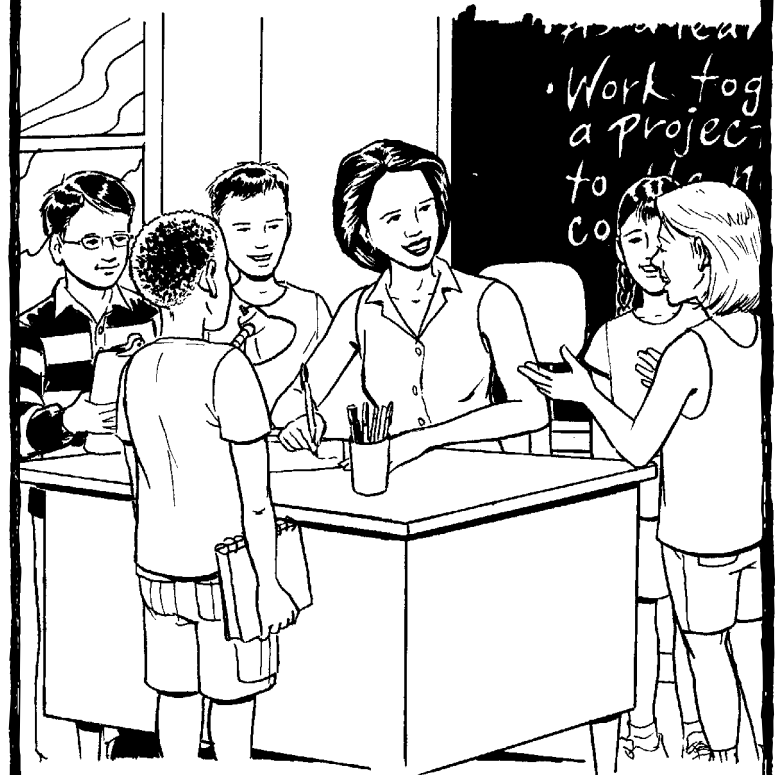


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Correlation

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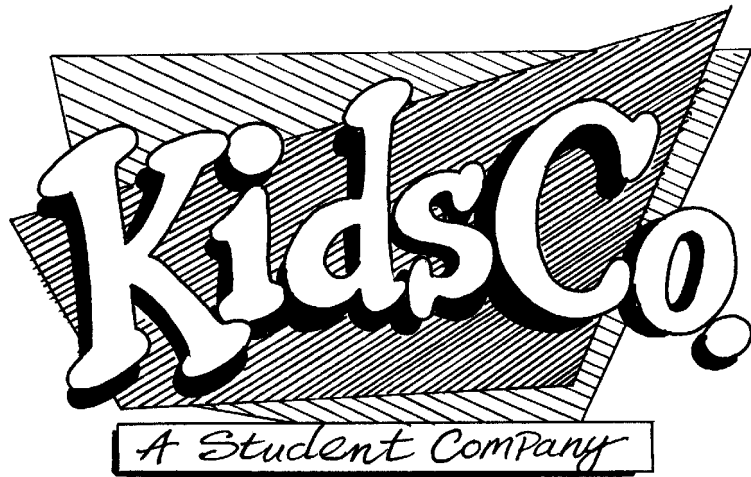


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A Successful Year

“Okay, let’s get started,” Ms. Maybry said to the Kids Company Leaders Team (KCLT). Kids Company (Kids Co.) was a national program of school companies run by students. The Adams School Kids Co. had 93 members from six grades. The Leaders Team was made up of five students who were elected each year. Ms. Maybry was their advisor.

"It's been a successful year," Ms. Maybry began.

Adams Kids Co. had **exceeded** its goal for the year. The members had built the school garden, and opened a school store, *and* collected coats for the homeless.

"You did so well. I wrote to the Kids Co. state **committee** about your success." Ms. Maybry explained.



Important News

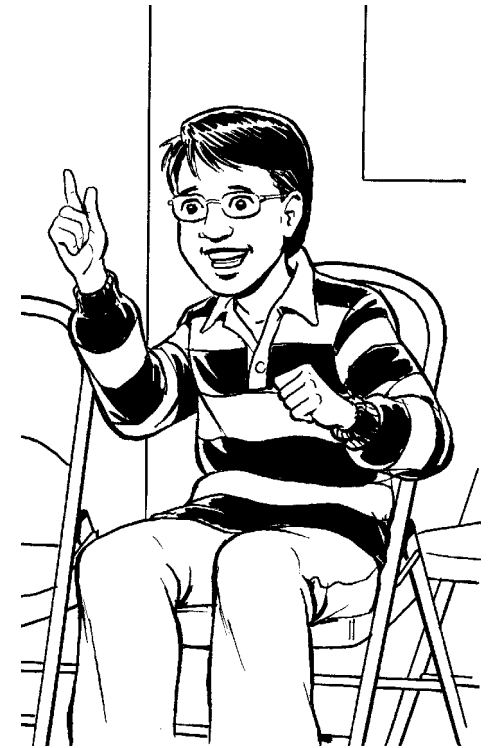
"I have important news," Ms. Maybry stated.

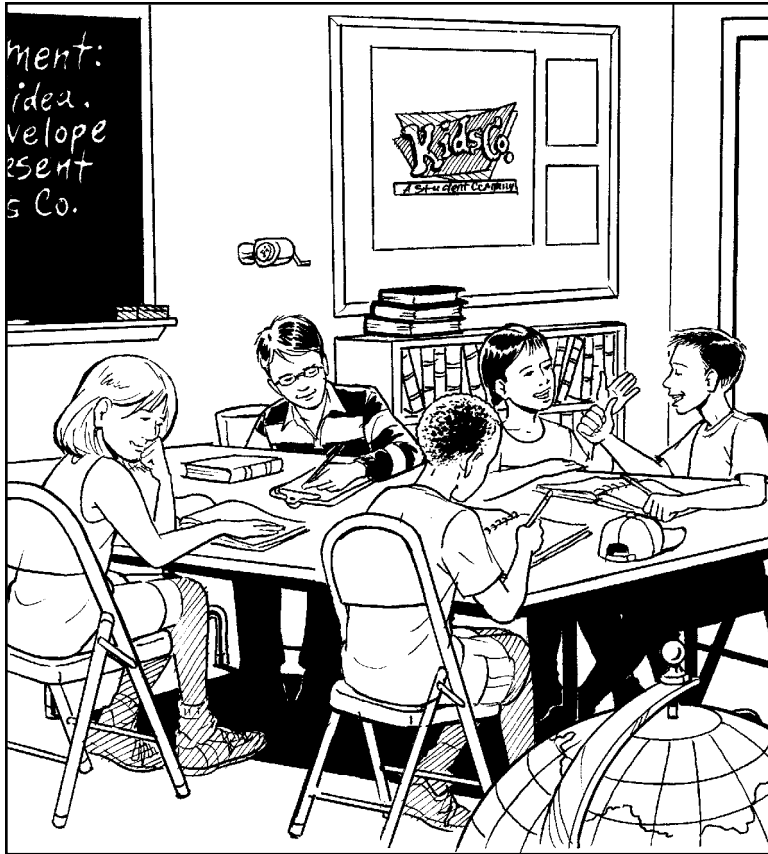
"Cool!" Mandy interrupted, always ready to talk.

"As members of the KCLT, you have been invited to **present** a project to the national Kids Co. committee. If the committee members approve your plan, they will award \$3,000 to fund your project," Ms. Maybry continued.

"Whoa!" said Brian, the math whiz and Kids Co. **finance** guy. "We could really be in business."

"Yes," said Ms. Maybry cautiously, "but you need a plan."





"Look over the **requirements**," Ms. Maybry advised. "Agree on a project to propose."

Jason and Elizabeth began reading and taking notes. Chris and Mandy started talking about how exciting this opportunity was. Brian was figuring out how much time they had to complete the project.

"Let's start a bookmobile for preschoolers," said Brian.

"How about a baby-sitting program to help adults going back to school?" offered Chris.

"Or a music video with a message," Mandy added.

"Wait a minute, you guys!" Elizabeth interrupted. "Aren't we a team? We have to decide together."

"Looks like we're going to have to decide on a way to decide," Jason observed.





The leaders stopped what they were doing. They sat looking at each other not sure what to do next.

Again, Mandy was the first to speak. “How are we ever going to pick a project?” she said.

“We could put all of the projects in a hat and pick one,” Chris suggested.

“That doesn’t seem right,” Jason said. “We were elected to lead. We should be doing more than just throwing ideas in a hat.”

Making a Decision

“What do the rules say?” Mandy asked.

Elizabeth explained that the project had to follow the Kids Co. **mission statement**, and the plan had to show how the money would be used.

Jason pulled out the Kids Co. mission statement. He read:

“Kids Co. **participants** work together to learn and use the ways of business to run successful projects that benefit the school and community in a positive way.”





“How will we choose?” said Chris. “We can’t draw straws or play Rock, Paper, Scissors.”

“We have to operate like a business,” Elizabeth agreed.

“How do we do that?” asked Brian.

“We ask the people who elected us,” suggested Jason.

“What a great idea,” said Mandy. “We’ll present our ideas to our **stockholders**, like a real **corporation**.” Mandy could find the drama in any situation.

The team leaders decided they would present their ideas to all the members of the Adams Kids Co. Then they would ask the members to vote on their project **presentation** ideas. They would present the members’ favorite idea to the committee. The kids shared their plan with Ms. Maybry.

“I think that’s a great plan,” Ms. Maybry said. “It shows leadership to ask the members of the company to participate in your decision.”



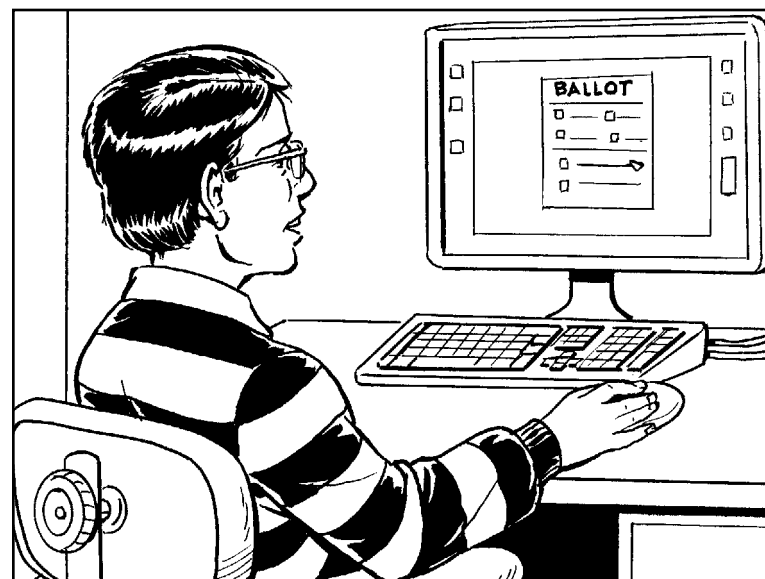


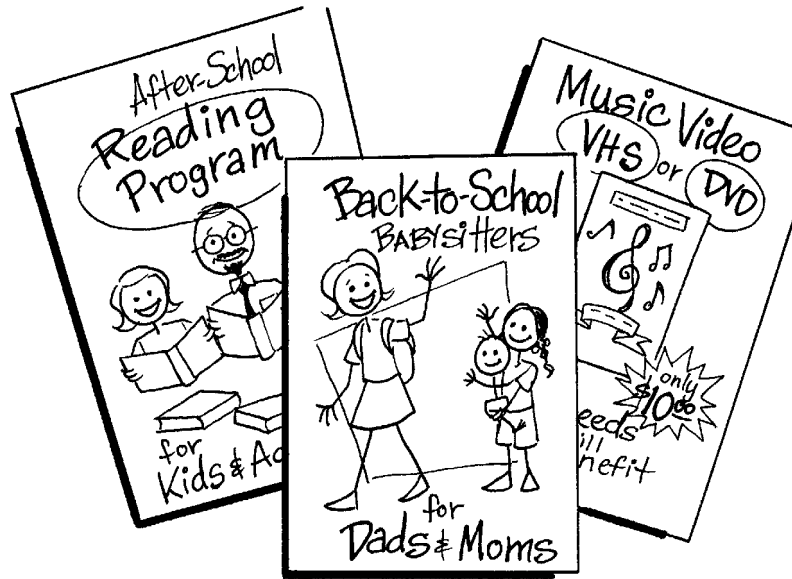
The team divided up the tasks. Brian, Mandy, and Chris began **brainstorming** project ideas. They wanted to start with a list of **potential** ideas and end up with no more than three final ideas to put on the **ballot**. They had a lot of discussing to do.

Elizabeth and Jason would check that each idea supported the Kids Co. mission statement as they put together the information for the presentation.

Mandy and Chris began preparing their presentation to the Adams Kids Co. members. First, they would review last year's successes. Then, they would read the Kids Co. mission statement and tell the club members about the invitation they had received from the Kids Co. state committee. At the end of their presentation, they would talk about the **proposed** ideas and pass out the **voting** ballots.

Brian was preparing a letter inviting all of the members to meet after school on the following Monday. After that, he would design the ballots using a computer program.





By Thursday afternoon, the list of projects was complete. The entire KCLT agreed that the three projects were supported by the Kids Co. mission statement and were good enough to present at the club meeting. The ballot was complete. All was in order.

- An after-school reading program for kids and grown-ups.
- A music video for sale to promote the school tutoring program.
- A baby-sitting program for the kids of adults who are going back to school.

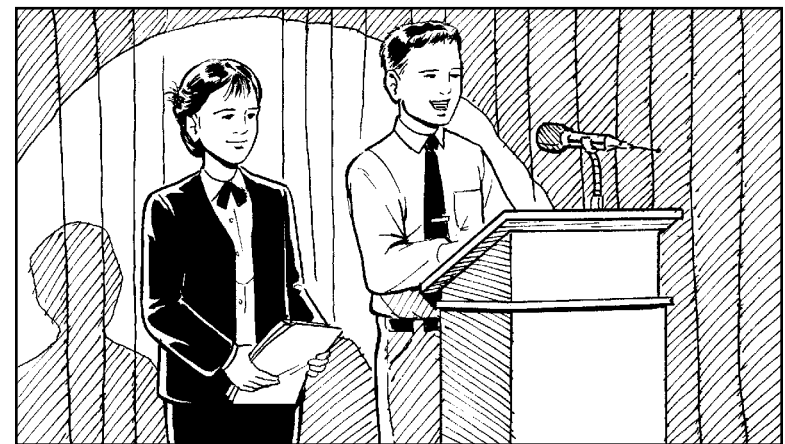
The Company Meeting

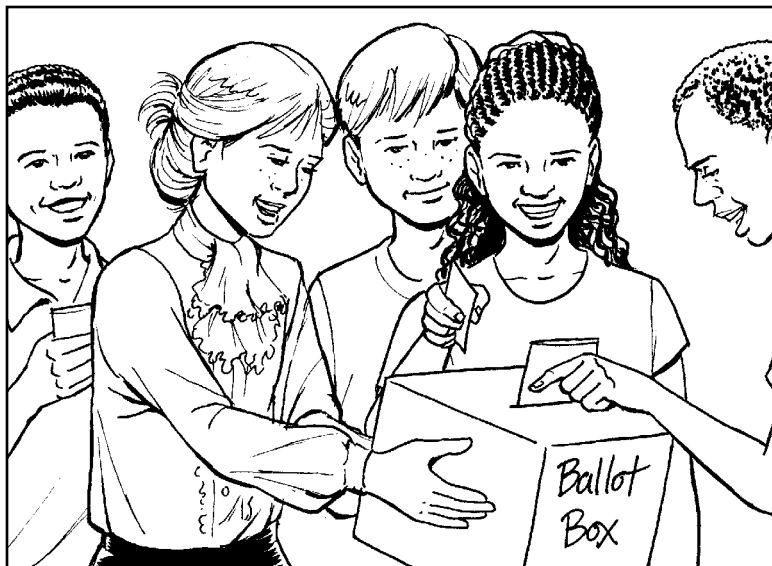
The day of the meeting arrived. The members of the KCLT dressed in their most business-like clothes. The club met in the school multi-purpose room.

“Are you guys ready?” Brian asked Mandy and Chris.

Mandy nodded her head. Brian thought it was the first time he saw Mandy answer without words.

Mandy and Chris gave their presentation. The whole club applauded. The students were glad to be included in the decision-making process. The ballots were passed out.





Elizabeth collected the ballots and most of the club stayed to see which project would be voted the favorite. As it turned out, the after-school reading program won by a landslide.

"I guess everyone agreed that our school could use the money to buy students more books," Brian said.

"Or maybe they thought the music video wouldn't sell," Mandy suggested.

"Maybe they thought helping parents needing baby-sitting would be too hard for students to organize," said Chris.

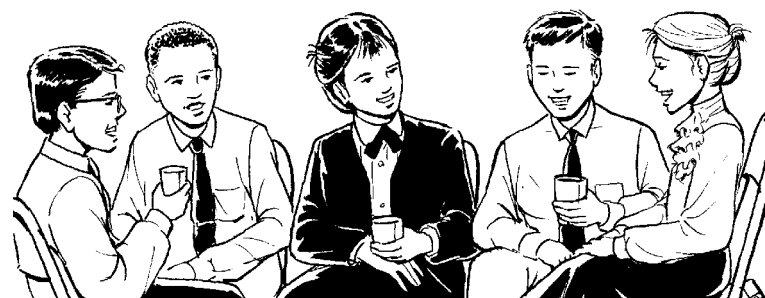
The Plan

"Whatever they thought," Brian said, "We'd better get to work. We have a project. Now we need a good **business plan**."

But the plan didn't take long, because Brian had been working on all three plans all along. He sat with the Leaders Team and Ms. Maybry to show them how they might spend the \$3,000 to buy books, supplies, and advertising for the program.

"Brian," said Mandy, "You are the financial expert—you should present the plan."

"Thanks, but I get so nervous when I talk to a group," Brian said, "You and Chris can present to the committee. You two are the talking experts. No question." And everyone laughed.



Are you interested in starting your own business?

It all starts with a good idea and some planning. First, you'll need to write a business plan.

- ❶ **Develop a mission statement.** Start by writing a sentence or two that outlines the main goal or purpose of your business. (Make sure your goal is realistic.)
- ❷ **Determine the need for your product or service.** Talk to friends, family, and neighbors. Find out if they would pay for your product or service and how much they would be willing to spend.
- ❸ **Decide what you will name your business.**
- ❹ **Find out what it will cost to start and operate your business.** Determine how much money you will need to run your business and how you will raise the money.
- ❺ **Determine how you will operate the business** while attending school, playing sports, etc.?
- ❻ **Decide how you will advertise.** How will you let people know about your new service or product?

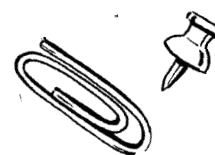
Glossary

ballot	a printed paper used in voting (p. 13)
brainstorming	developing ideas (p. 13)
business plan	an outline for how to start a business (p. 18)
committee	a group of people who consider or decide on a course of action (p. 5)
corporation	a business organization with specific business powers and responsibilities (p. 11)
exceeded	greater than expected (p. 5)
finance	the business of managing money (p. 6)
mission statement	a sentence that outlines the goals of a company or organization (p. 10)
participants	people who take part in an event or activity (p. 10)
potential	possible choices (p. 13)
present	to give something to somebody (p. 6)
presentation	a performance or demonstration put on before an audience (p. 12)
proposed	to have presented something as an example (p. 14)
requirements	necessary items (p. 7)
stockholders	people who own part of a company (p. 11)
voting	expressing a choice (p. 14)

Name _____

INSTRUCTIONS: Create an idea of a project that would benefit the school and community. Write and/or draw a description of the idea in the box labeled "Project Idea." Then use the vocabulary words listed to explain the process of organizing a vote on your idea. Write the process in the box labeled "plan".

Project Idea



committee, requirements, proposal, presentation, ballot

Plan



Reading a-z

Important Information	Important Information	Important Information	Important Information

WE'RE IN BUSINESS • LEVEL R • 2

[illegible]

SKILL: SUMMARIZE

Name _____

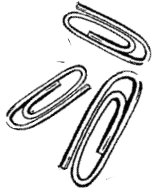
INSTRUCTIONS: List the steps that the KCLT used to choose and present their ideas for their new business plan. Use the information given on pages 13-18 of *We're in Business*.

Topic:
First
Next
Next
Next
Next
Next
Next
Last

Name _____

INSTRUCTIONS: Add the suffix *-ing* to each root word, dropping the *e* when necessary. Write the new word on the line next to the root word. Then, write the new word on the line below it, and use each new word in a sentence.

Example:



go → going

The team was going to vote on the best idea.



1. brainstorm → _____

2. prepare → _____

3. discuss → _____

4. make → _____

5. throw → _____

6. read → _____

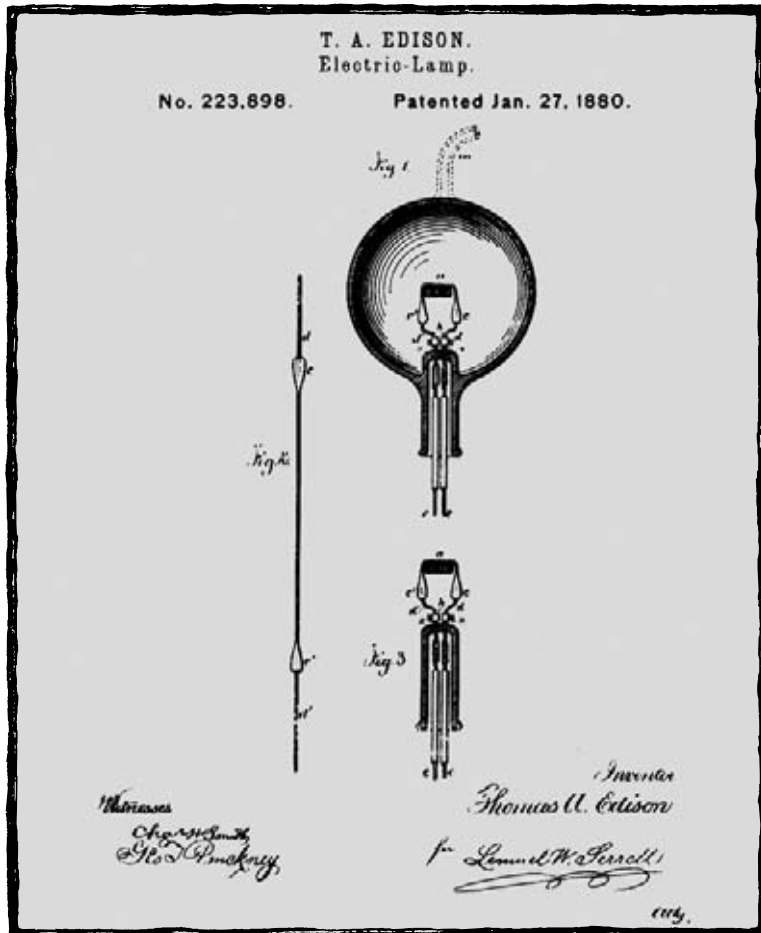
7. take → _____

8. figure → _____

Inventions

A Reading A-Z Level R Leveled Reader

Word Count: 1,187




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Inventions



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Introduction

When you think of an **invention**, what comes to mind? Is it something wacky or something useful? Every day, people all over the world come up with new inventions. These inventions often give us a better way to do something. Most inventions make life easier or more enjoyable.

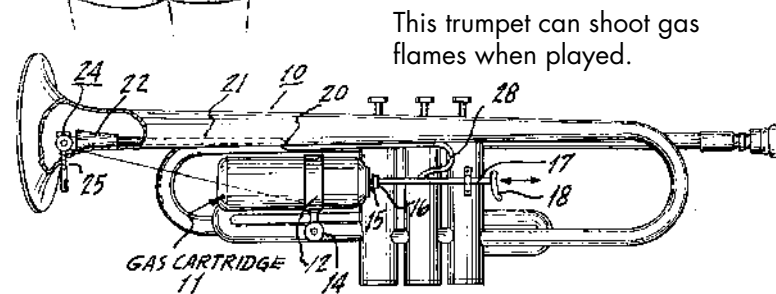
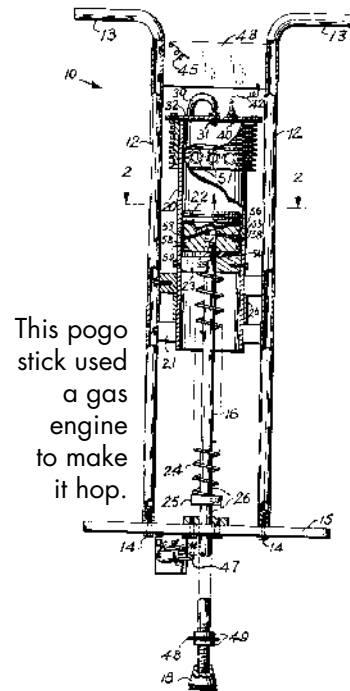
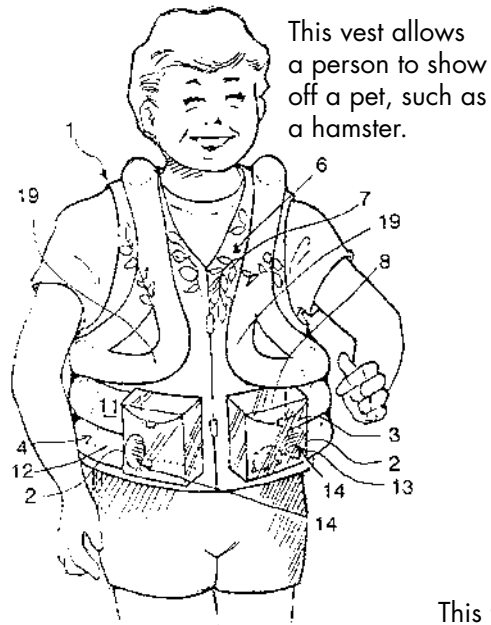


An invention isn't always a thing. An invention can also be a **process**. Examples of processes are ways of making certain metals or glass, or even kinds of cheese.

This shows a nine-step process common for making cheese.

Weird Inventions

These are actual patent drawings of weird inventions.



Not every invention is useful. Over the years there have been many weird inventions. All of these inventions were made to fulfill a need or a want. But many of these weird inventions either didn't work, or caused more trouble than good.



Inventions Follow Inventions

One invention often leads to another invention. For an example, let's look at the



wheel. Long ago, the only way people could get from place to place was to walk. It could take days to walk long distances. Then, someone invented the wheel.

Next, people started putting wheels on logs and boards. These simple carts made it easier to carry goods and people. Pulling the carts was less work than walking and made it easier to travel farther distances. Then people started using horses, oxen, or mules to pull the carts.

In the 1800s, the gasoline **engine** was invented. The engine could be placed on the carts and used to power the carts. Mules, horses, and oxen were not needed as much.

Engines have led to the invention of many other things that help move people and goods from place to place. Some of these inventions are steamboats, cars, trains, and airplanes. These inventions helped people and goods cross whole continents in just a few days.

Think About It

The car has changed the lives of people around the world. It has led to many other inventions. How many things can you think of that were invented because of the car? Here are just a few to get you started. How many more can you add to the list?

- Traffic lights
- Gas pumps
- Expressways
- Car washes
- Drive-thru restaurants



Over time, more inventions made engines better. Today, jet engines help planes fly around the world in just a few hours.

The jet engine, and humans' desire to fly higher and faster, led to the invention of a more powerful engine called the **rocket** engine. The rocket engine helps send people into space and to the moon. It took many steps and many years of inventing to get people from the first airplane to the spacecraft that took humans to the moon.

History of Transportation

About 3500 B.C.	first wheeled carts	
About 2000 B.C.	horses first used to pull carts	
1662	first horse-drawn public bus	
1783	first practical steamboat	
1801	first steam-powered train	
1885	Karl Benz builds practical gasoline-powered car	
1903	Wright Brothers fly first airplane with an engine	
1926	first rocket launched	
1947	supersonic jet flight	
1969	mission to the moon	
1970	first jumbo jet	
1981	space shuttle launched	

Need Is the Mother of Invention

Sometimes when people want to explore new places, such as the moon, or new things, such as stars, they need new inventions. It has been said that “need is the mother of invention.” This means that a need for something forces people to invent ways to solve that problem. New inventions can make exploration possible or easier.

People wanted to explore space. Space is different from Earth. Space has no air, which means there is no oxygen and no air pressure. Space is also very cold. People would not be safe in space without the right equipment.

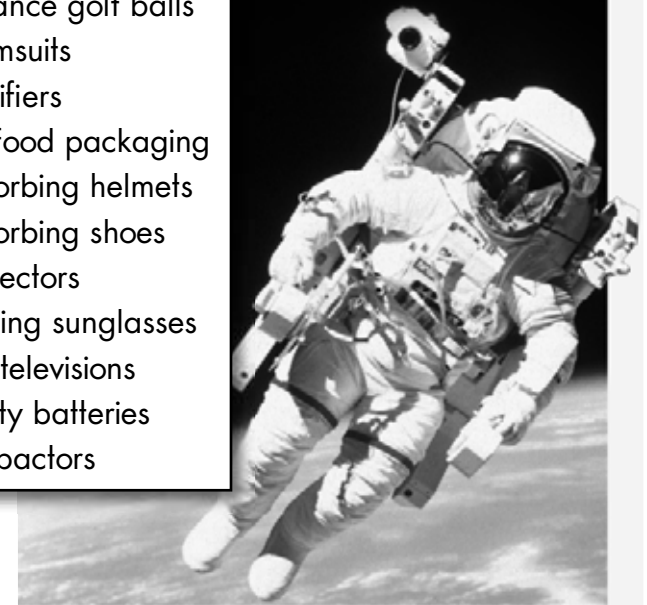
The New Horizons spacecraft lifts off for its trip to the planet Pluto.



Space Exploration Product Spin-offs

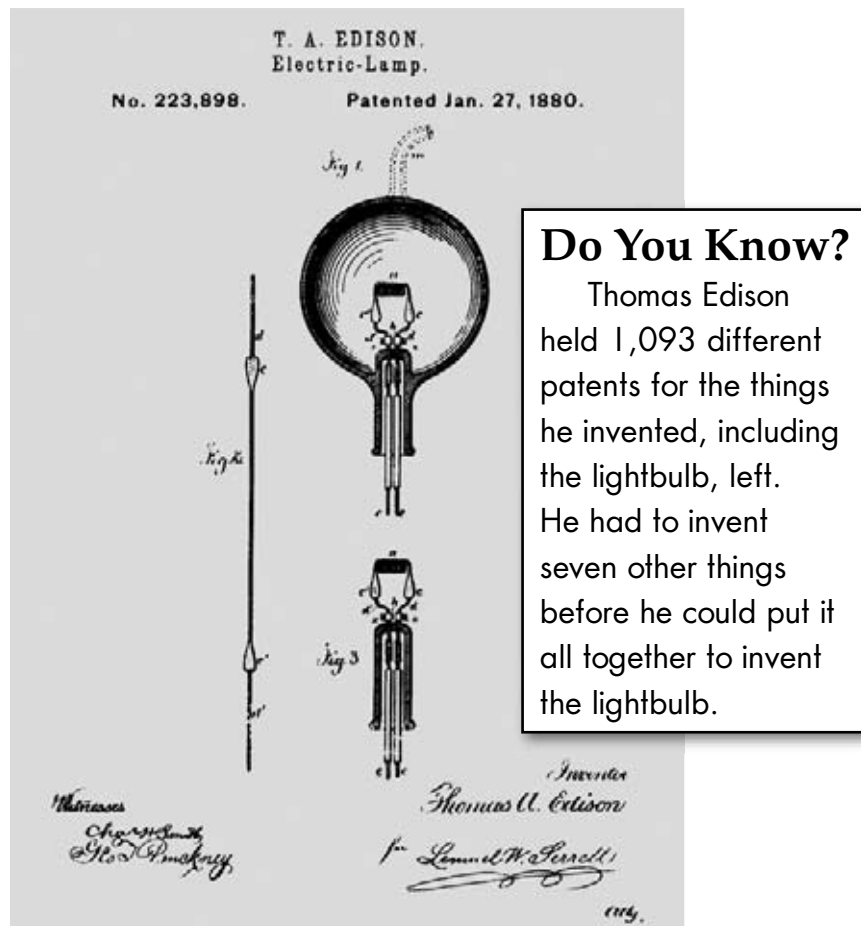
- Enriched baby food
- Better distance golf balls
- Faster swimsuits
- Water purifiers
- Improved food packaging
- Shock-absorbing helmets
- Shock-absorbing shoes
- Smoke detectors
- Self-adjusting sunglasses
- Flat-panel televisions
- High-density batteries
- Trash compactors

The backpack this astronaut wears makes moving in space easier.



Scientists needed to invent ways for people to breathe in places where there was no air. They needed to invent new materials to keep both humans and spacecraft safe from extreme temperatures. Scientists invented spacesuits and building materials that would not crush under pressure. In fact, many new **products** were invented because people wanted to explore space.

When people invent something, they usually apply for a **patent**. A patent ensures that only the person who owns the patent can make or sell the invention. If you have a patent, no one else can take your idea. Complicated products, like cars, may have hundreds of patents for the thousands of parts used to make them.



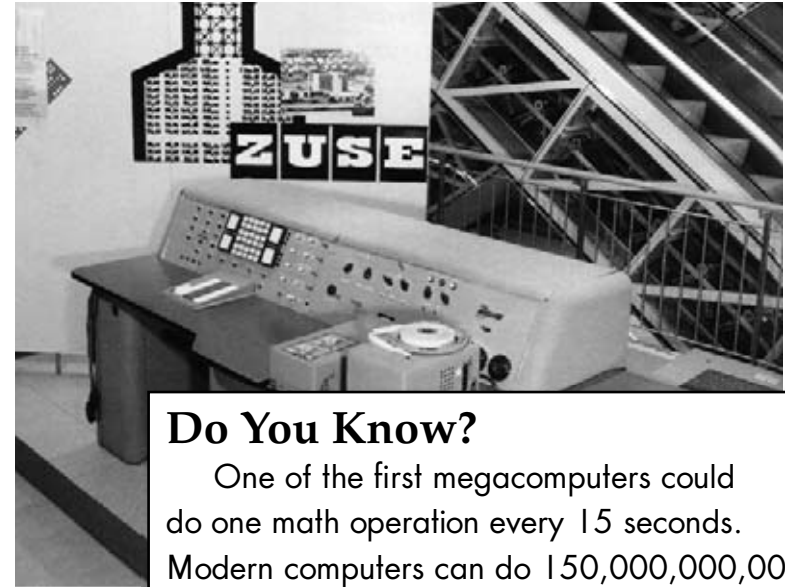
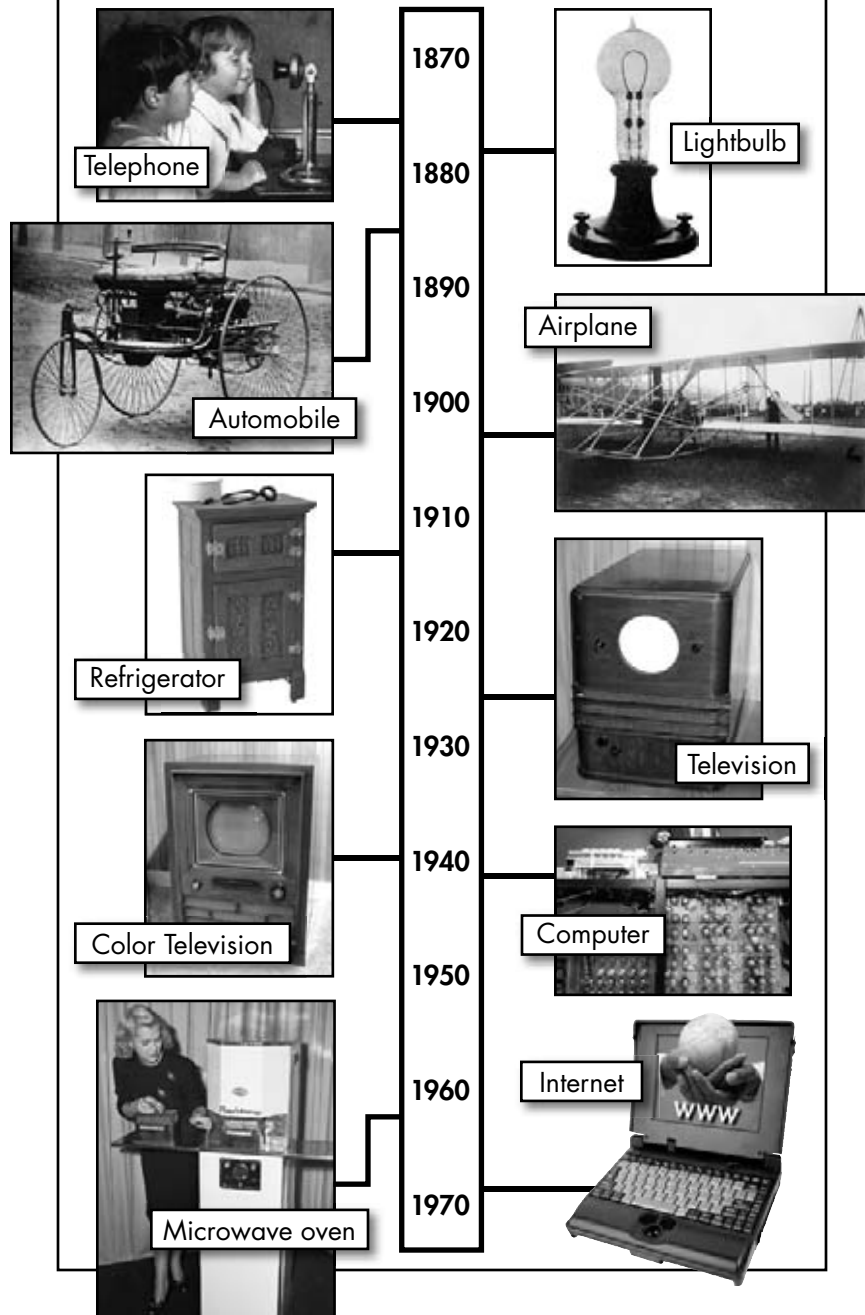
Famous Inventions

There have been millions of inventions over the years. Some of them, like the invention of the lightbulb, are well-known. However, others are obscure.

Most inventions get better over time. For example, Thomas Edison's first lightbulb, invented in 1879, has had many improvements since then. Think about how each invention in the timeline on the next page has changed and has been made better over the years. What would your life be like without these inventions?



Most Famous Inventions



Do You Know?

One of the first megacomputers could do one math operation every 15 seconds. Modern computers can do 150,000,000,000 operations in 15 seconds!

Computers: Then and Now

Of all the inventions of the last 50 years, none has changed our lives more than the computer. The computer is a machine that has many parts. Many people have helped make the computer what it is today.

Many historians think that a German named Konrad Zuse invented the computer. In 1941, he used old materials to build the first computer. It could be **programmed**. It was used to do difficult math problems.

Later, two professors from Iowa State University in the United States invented a more powerful computer. It was the first electronic **digital** computer. It was the size of a desk. It had more than 300 glass tubes and used one mile of wire. It weighed 700 pounds. That is 140 bags of flour!

In 1944, two inventors worked together to build an even bigger and better computer. It was 55 feet long and 8 feet high. It filled a giant room and weighed 5 tons, or about as much as one elephant. It used lots of energy and needed a way to help keep it cool.



Harvard – IBM MARK I

In 1947, the **transistor** was invented. This meant that computers would no longer need hundreds of large glass tubes, and smaller computers could be built. The invention of **integrated circuits** then took the jobs of many electronic parts and put them into one part. Then **microprocessors** were invented, which took lots and lots of integrated circuits and put them into one microchip. These improvements led to the computers we use today.

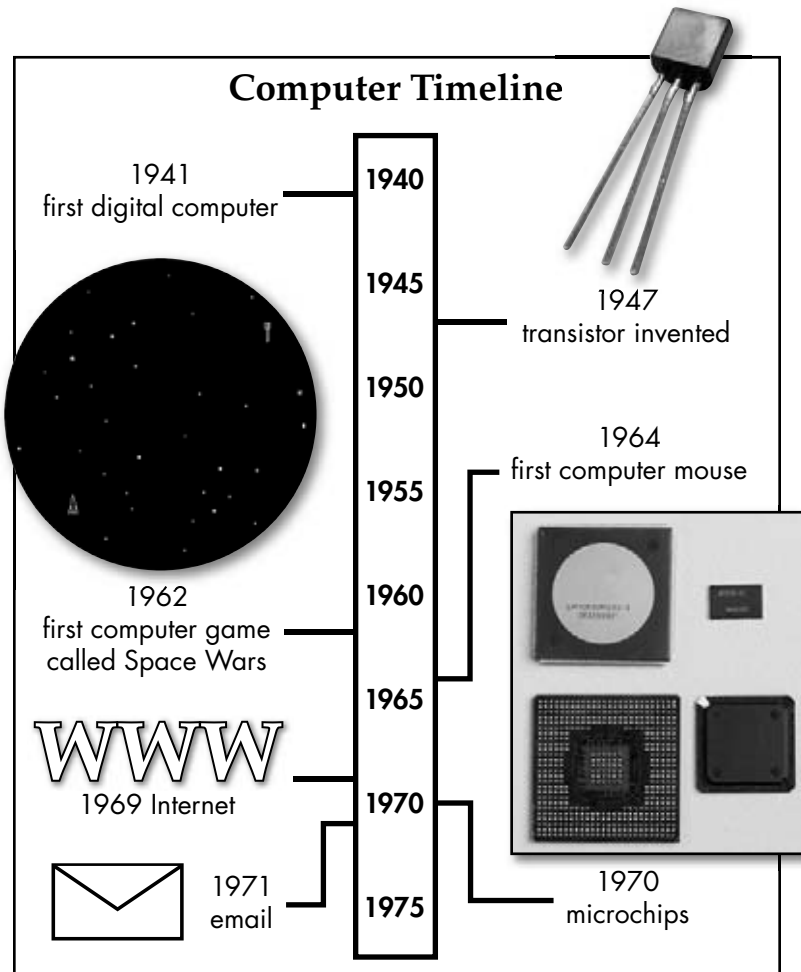
But computers still needed other inventions. People needed to invent **software** to make the computer do different things. Also, people wanted a smaller screen and a mouse that was



easier to use. Even more inventions came as people discovered new things to do with the computer.

A computer, a mouse, and software allow this boy to draw using this laptop.

Computers made way for the Internet, a whole new way of communicating. Webpages, electronic mail, and high-speed Internet connections soon followed. These things made communicating with people all over the world easy. What might computers do in the future? What will be invented then?



Invention, Discovery, or Creation?

Have you ever wondered how an invention is different from a discovery or a creation? One way to find the answer is to look at the people. Explorers are people who discover. Astronomers explore space. They discover new stars and solar systems.



Van Gogh's self portrait

Creators are artists, composers, and writers. They make works of art, music, and stories. Vincent Van Gogh was an artist who created fantastic paintings. Beethoven was a composer who created beautiful symphonies. William Shakespeare was a writer who created great plays.

Inventors invent. They make things that they think make life better or work easier. Thomas Edison worked for thousands of hours inventing the light bulb. He was a true inventor and went on to invent many things, such as the first movie projector.

Conclusion

You might think that all the good things have been invented and that there is little left to invent. But that is not true. There is always a need to make things better. With each new invention, creation, and exploration, another is sure to follow. Maybe you will be the person who will invent the next product to make life easier or more exciting for us all!



Abby Fleck and her dad, Jon, show off Abby's invention. It cooks bacon in a healthier way than frying it in a pan on the stove.

Glossary

digital	storing information as numbers (p. 15)
engine	a machine that uses energy to create movement (p. 7)
integrated circuits	tiny electronic parts that make a computer work (p. 16)
invention	a new device or process (p. 4)
inventors	creators of a new device or process (p. 18)
micro-processors	tiny chips that contain many integrated circuits (p. 16)
patent	legal rights to an invention (p. 11)
process	a series of actions (p. 4)
products	items or objects (p. 10)
programmed	told how to do an action (p. 14)
rocket	a machine designed for space travel (p. 8)
software	computer programs (p. 16)
transistor	a small device that controls the flow of electricity in electronic items (p. 16)

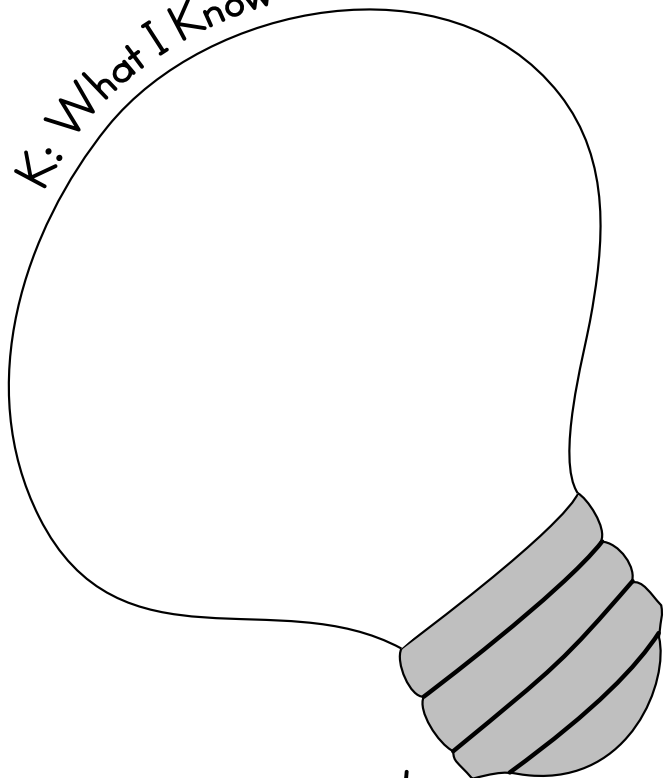
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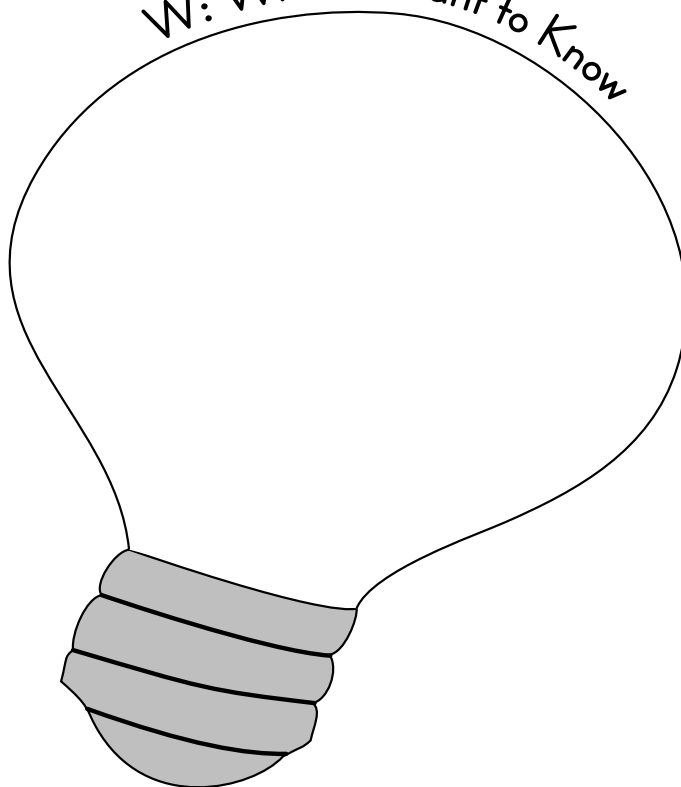
Name _____

INSTRUCTIONS: In the first lightbulb, write what you already know about inventions. In the second lightbulb, write what you would like to learn about them. After you finish reading, fill in the third lightbulb with information you learned and the fourth lightbulb with what you still want to know.

K: What I Know

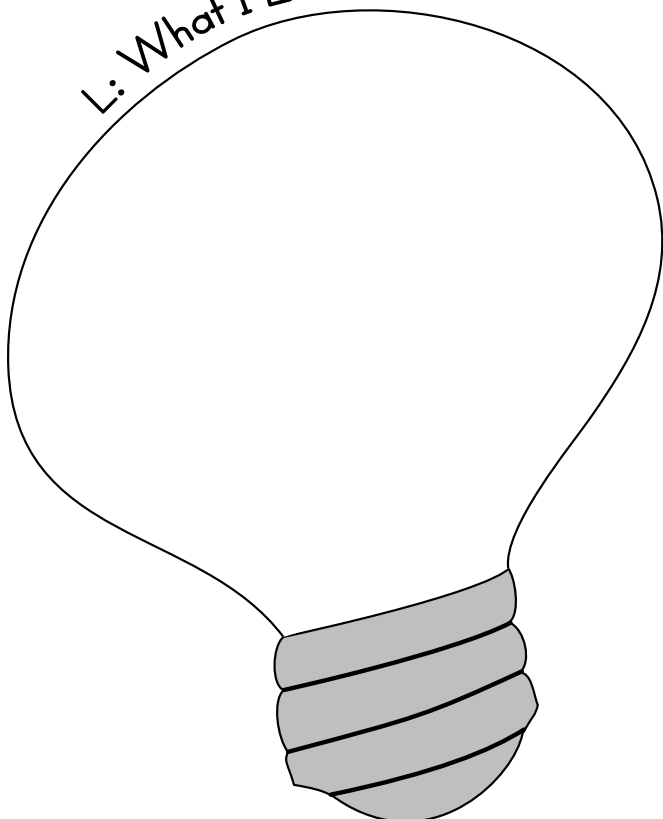


W: What I Want to Know

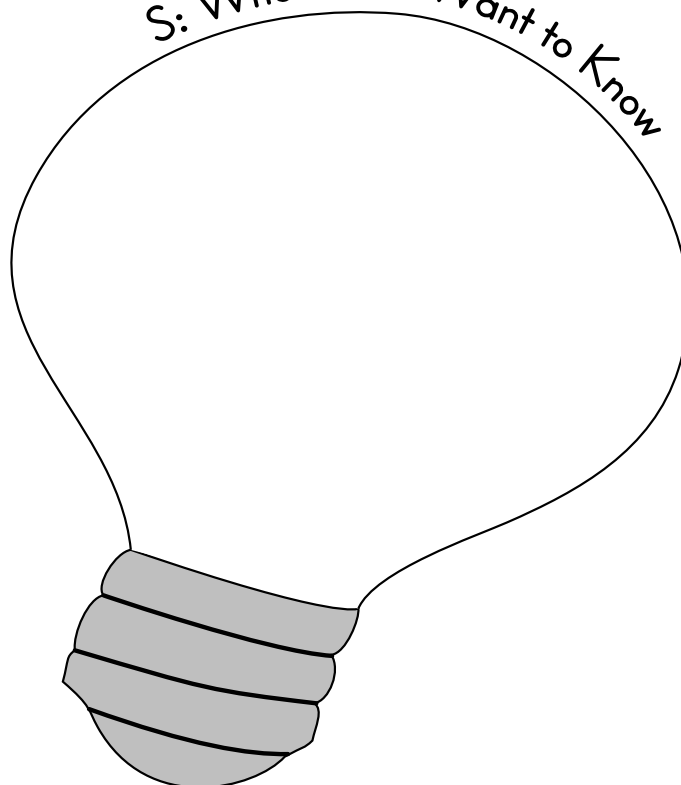


INVENTIONS • LEVEL R • 1

L: What I Learned



S: What I Still Want to Know



SKILL: KWLS/ASK AND ANSWER QUESTIONS

Name _____

INSTRUCTIONS: As you read, list causes in the left column and their effects in the right column.

Cause	Effect

INVENTIONS • LEVEL R • 2

SKILL: CAUSE AND EFFECT

Name _____

INSTRUCTIONS: Add the *-ing* suffix to each base word below. Write your answers in the box on the right.
Remember, with words ending in *-e*, you must first drop the *-e* before adding the suffix *-ing*.

Base Word	Suffix <i>-ing</i>
change	
include	
draw	
communicate	
paint	
explore	
excite	
breathe	
sell	
connect	

Name _____

INSTRUCTIONS: Use a thesaurus to locate synonyms for each word below. Write them next to the word under the heading *Synonym*. Then choose one of the synonyms to use in a sentence and write it in the box under the heading *Sentence*.

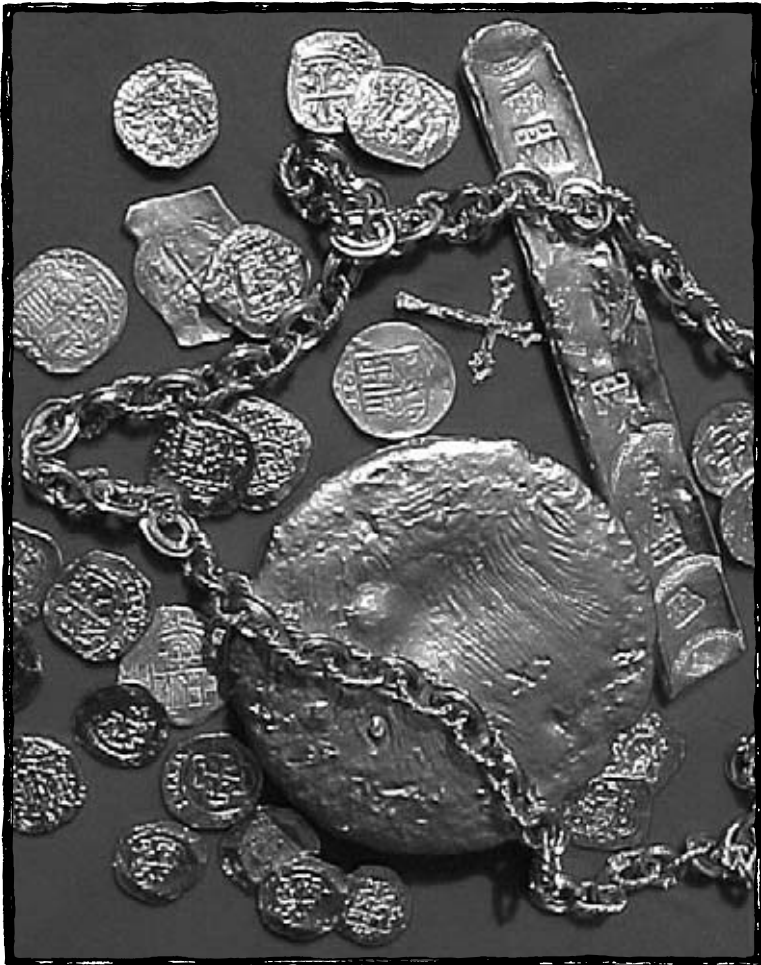
Word	Synonym	Sentence
change		
cold		
difficult		
easy		
help		
many		
new		



Treasure Found

A Reading A-Z Level R Leveled Reader

Word Count: 801

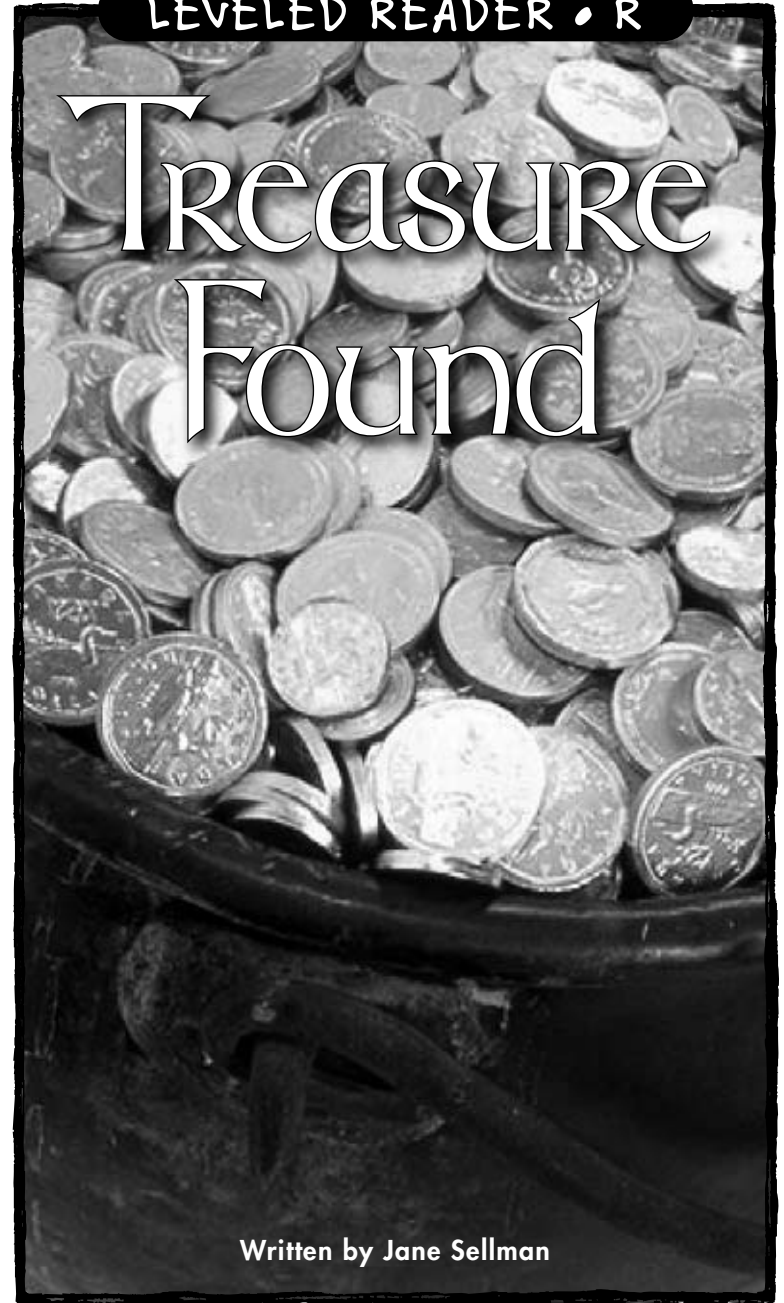



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LEVELED READER • R

Treasure Found



Written by Jane Sellman

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Correlation

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INTRODUCTION

On Saturday morning, you are busy cleaning your room. Under your bed, you discover a box. You look inside. You see a plastic ring, a birthday card with a dollar inside, a shell, and a postcard from a friend. You say, "Wow! I forgot about this stuff." You have just found treasure.



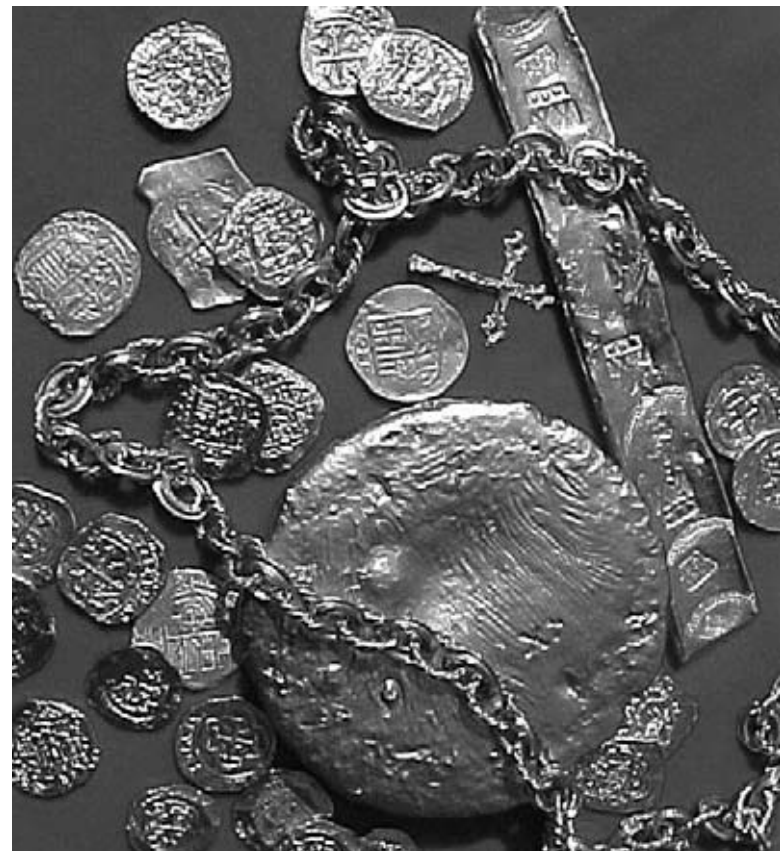


Ankh-shaped mirror cases, from King Tutankhamen's tomb

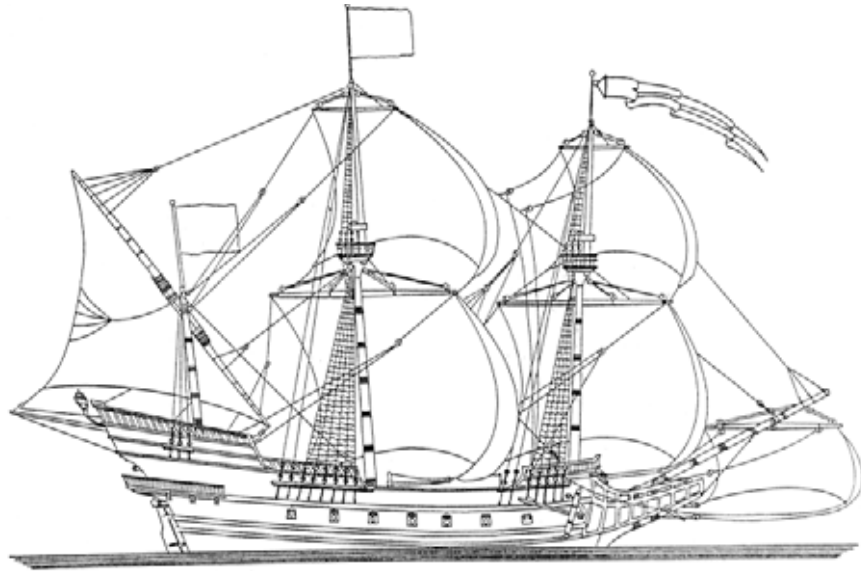
TREASURE HUNTING

Treasure is anything that someone thinks is **valuable**. Over the years, much treasure has been found. In 1922, Howard Carter found gold and gems in the tomb of ancient Egypt's King Tutankhamen. In 1874, Heinrich Schliemann dug up an ancient Greek city. In 1964, Robert Marx found a city, too, under the sea near the island of Jamaica. He also discovered thousands of silver coins.

In Florida, Kip Wagner picked up some Spanish coins called "pieces of eight," which had washed up on the shore. He knew they had come from a **shipwreck**. He started to search the ocean floor. He wanted to find the shipwreck. Over time, he found sunken treasure worth millions of dollars.



Kip Wagner found this gold, which came from ships that had been destroyed in 1715 by a hurricane.



What the *Atocha* might have looked like before it sank.

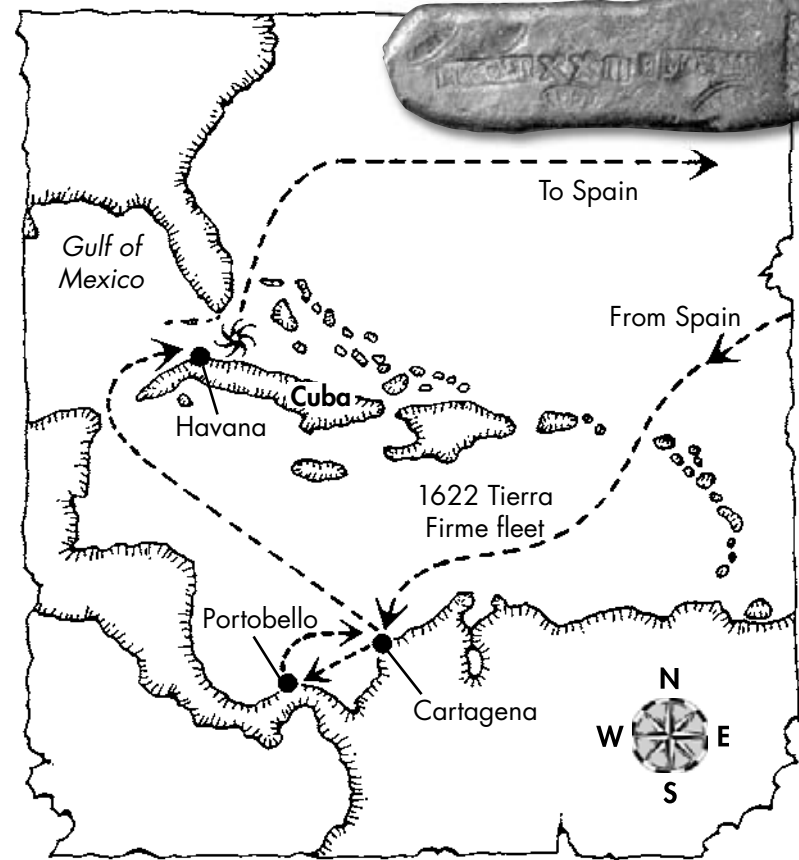
SUNKEN TREASURE

Sunken treasure is especially hard to find because it is under water. Yet, people continue to search for treasure deep under the sea. A Spanish ship called the *Atocha* (ah-TOH-cha) held one of the most famous sunken treasures.

In 1622, a group of Spanish ships, including the *Atocha*, took on a **cargo** of gold, silver, coins, and gems. The ships left Havana, Cuba, headed for Spain. They sailed into the path of a great storm. The *Atocha* and several of the other ships in the group sank near the Florida Keys.

Spain sent ships to find the cargo from the sunken shipwrecks. Divers found the cannon from the *Santa Margarita*, one of the ships from the group. They could not find anything else because another storm had broken up that ship. They did not find any sign of the *Atocha*.

Gold bars from the
Santa Margarita



MEL FISHER AND THE “ATOCHA”

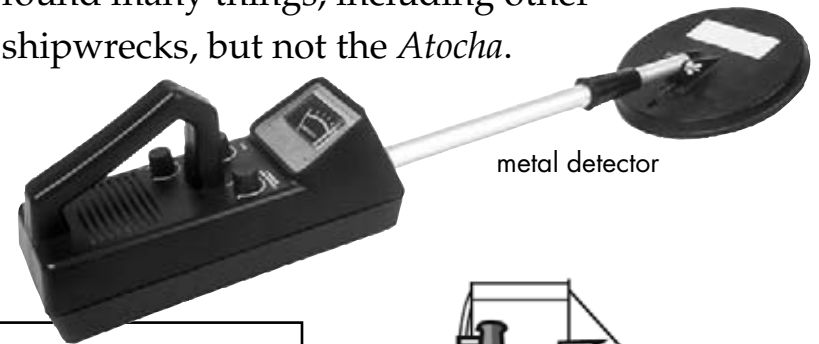
For years, people dreamed of finding the *Atocha*. Mel Fisher dreamed of it, too. As a boy, he had read *Treasure Island*, the story of a young man who went looking for pirate treasure. Mel wanted to find lost treasure. Luckily, he liked diving under the sea. He even owned a dive shop.

In the early 1960s, Mel Fisher decided to look for the *Atocha*. Friends and family, including his wife, sons, and only daughter, joined in the search. People gave him money to help with the search. Everyone would share the treasure when the *Atocha* was found.



Mel Fisher
in dive gear

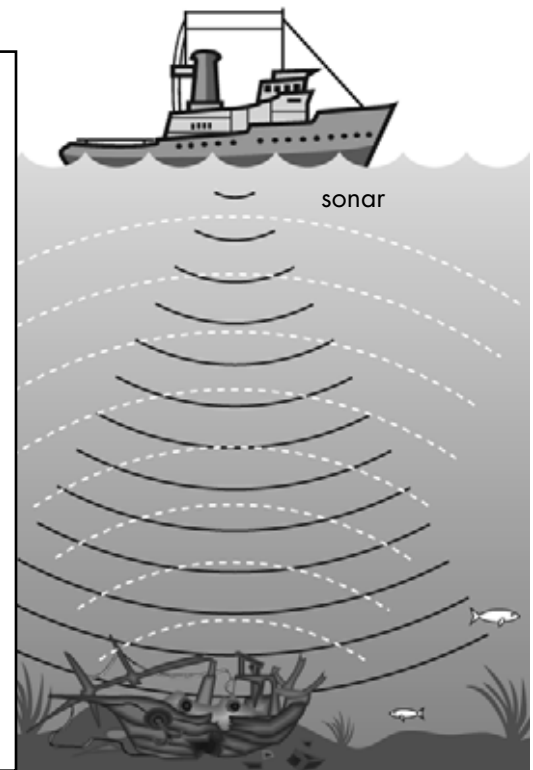
For several years, Mel and his crew searched the ocean. They used **metal detectors** and **sonar** to find pieces of the ship on the seafloor. Sonar can find things deep under the water that cannot be seen. Mel and his crew found many things, including other shipwrecks, but not the *Atocha*.

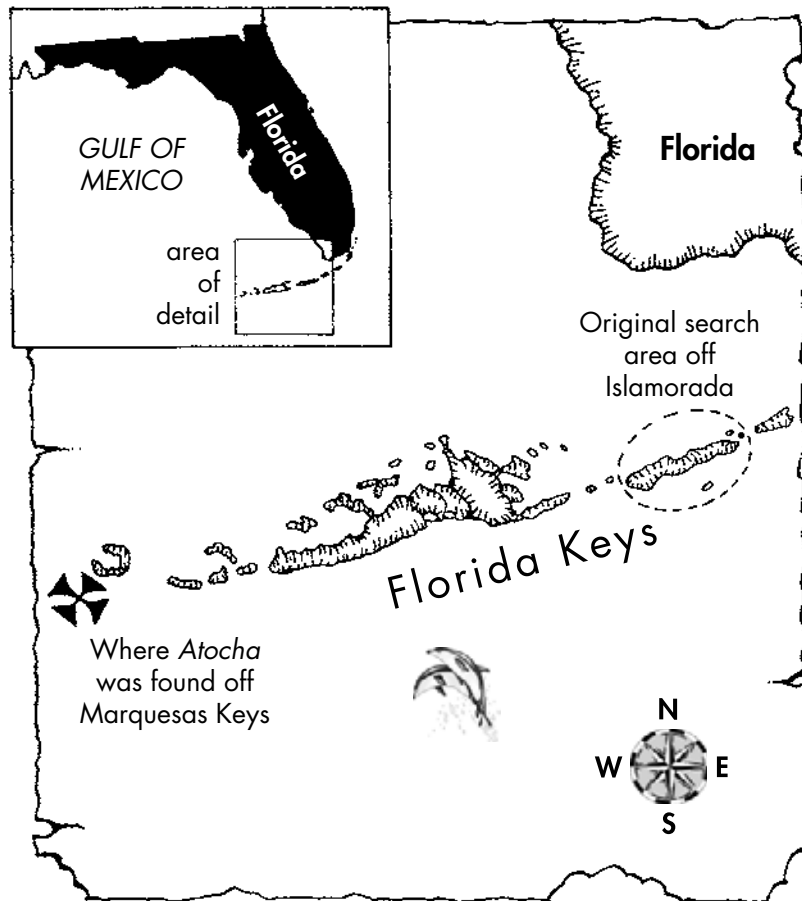


Do You Know?

Sonar uses sound to find objects under the water. A sound wave is sent out. When it hits an object, it bounces back to the ship.

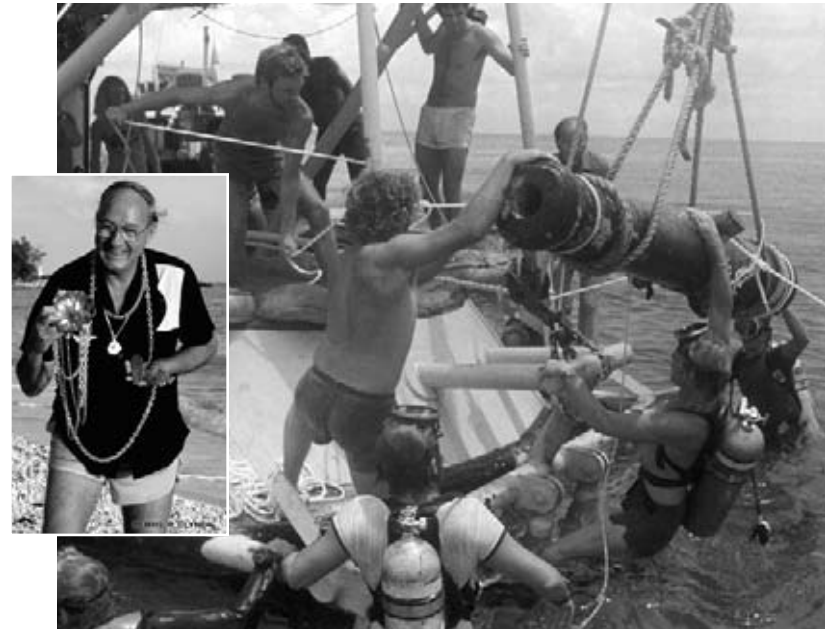
Mel Fisher invented another tool to help his search for treasure. The “mailbox” is a machine that fits on the back of a boat. It sweeps away sand on the seafloor so divers can find things more easily. (It is shaped just like a mailbox.)





X MARKS THE SPOT

In 1970, Mel and his crew got help from a friend named Eugene Lyon. He looked through old books about Spanish ships. In them, he read the *Atocha*'s cargo list and **clues** to where the ship could be found. He told Mel that he had been looking in the wrong place!



Crewmen salvage a bronze cannon from the *Atocha* shipwreck.
Inset: Mel Fisher with gold chains and gold bars.

Mel and his crew sailed 100 miles from where they had been looking to a new place. Three years later, they found silver bars with **markings** they had not seen before. These markings matched the *Atocha*'s cargo list. Now they knew they were near the treasure. Still, two years later, they had not found the ship. Then, tragedy struck. Mel's son, Dirk; Dirk's wife, Angel; and a diver, Rick Gage; drowned when their search boat overturned in the ocean.

Mel missed his family, but he decided to continue the search. For ten more years, he and his crew searched for the treasure. In 1985, Mel and his crew finally found the *Atocha*. The treasure included gold and silver worth millions of dollars. Mel and his crew marked where everything had been found. They took pictures, too. They wrote down information for **historians** who might want to study what happened to the ship.



Divers catalog the treasure found in the shipwreck *Atocha*.

The treasure from the *Atocha* was great and very valuable. Mel gave a part of the treasure to the state of Florida. He also gave some of the treasure to **museums**. He shared the rest of the treasure with his family and others who had helped him in his search. He sold some of it, too.



Today, you can visit the Mel Fisher Maritime Heritage Society and Museum in Florida. You can see many of the beautiful things he found.

Ship goods and gold uncovered as part of *Atocha* treasure



CONCLUSION

What treasure still waits to be discovered? You could join one of the many treasure-hunting groups around the world. You might discover an ancient city or tomb, or even a sunken or buried chest of gold. You can find many books and websites about treasure and treasure hunting. Maybe you will be the one to find the next great treasure.

GLOSSARY

cargo	goods carried by sea, road, or air (p. 7)
clues	things that help solve a mystery (p. 11)
historians	people who know history well and teach or write about it (p. 13)
markings	symbols that tell what something is or where it came from (p. 12)
metal detectors	electronic devices that are used to find buried metal objects (p. 10)
museums	buildings where objects of value in history, art, or science are kept and studied (p. 14)
shipwreck	a sunken or destroyed ship (p. 6)
sonar	a way of finding objects underwater by measuring the time it takes a sound wave to travel to and from the objects (p. 10)
treasure	anything of great value or worth (p. 5)
valuable	highly prized or important; often worth a lot of money (p. 5)

INDEX

Fisher, Mel, 9–14	shipwreck (-s), 6, 8, 10
Florida, 6, 7, 11, 14	sonar, 10
gold, 5–8, 13, 15	Spain (-ish), 6–8, 11

Name _____

Instructions: In the first column, write what you already know about the topic. In the second column, write what you would like to know. After you finish reading, fill in the third column with what you learned.

K: What I know	W: What I want to know	L: What I learned

Name _____

Instructions: Read the pronouns in the word box. Then read each sentence. Replace the underlined word or words in each sentence with a pronoun from the word box. Write the new sentence on the line.



him
them

he
they

she
it



1. Kip Wagner knew they came from a shipwreck.

2. He knew the Spanish coins could lead him to a hidden treasure.

3. The sunken treasure was buried far under the water.

4. The Spanish ships sailed into the path of a great storm.

5. Mel Fisher dreamed of finding the Atocha.

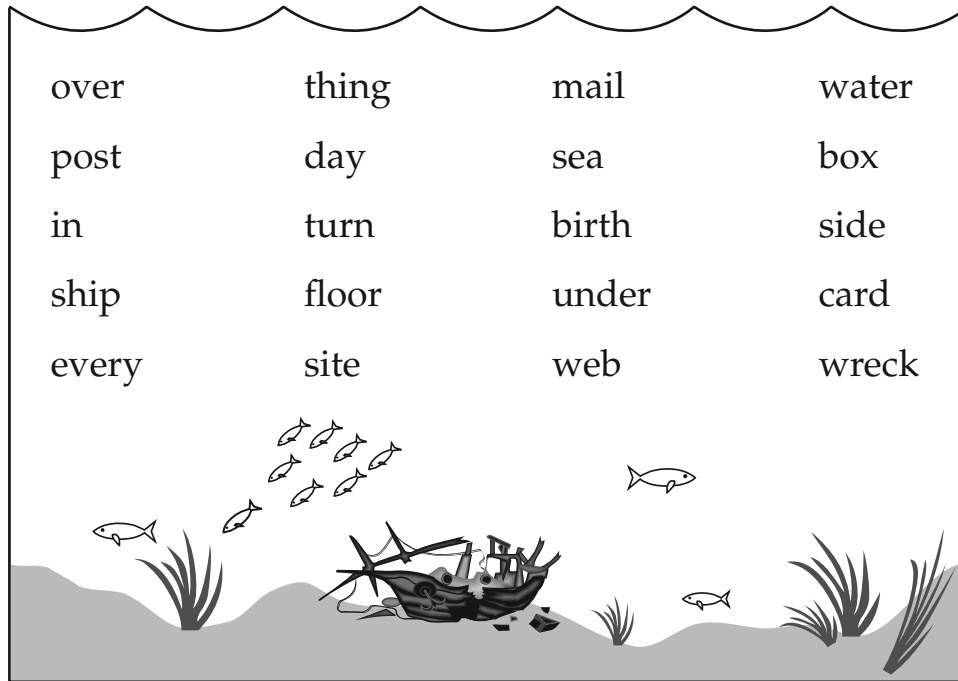
6. Mel's wife, sons, and daughter joined Mel in the search.

7. He read about Spanish ships and found Atocha's cargo list.

8. Mel shared some of the treasure with his family.

Name _____

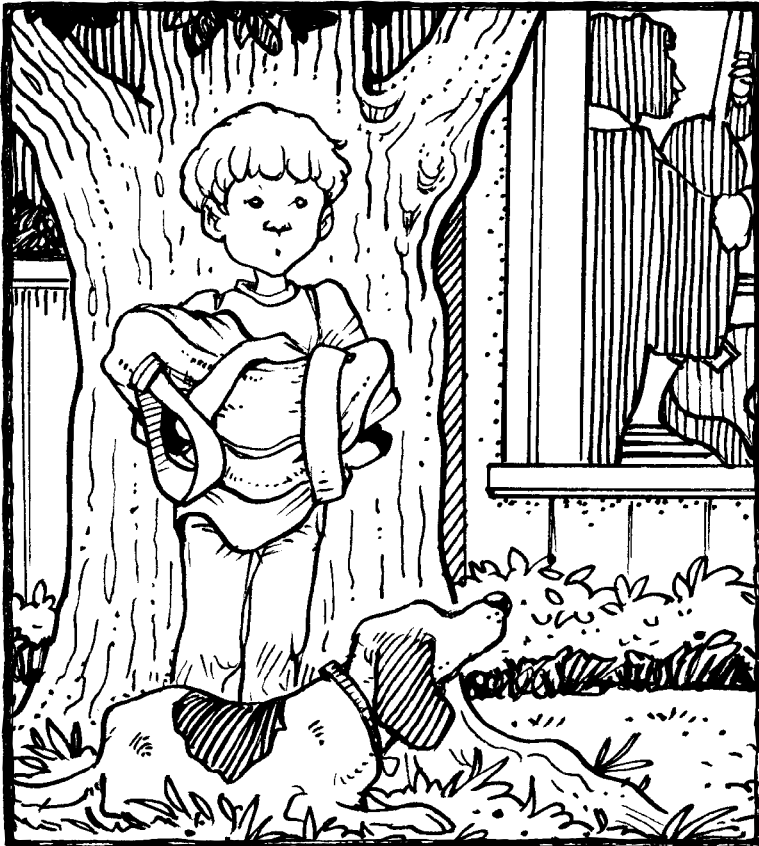
Instructions: Choose words from the box to join together to create compound words. Then write the compound words you created on the lines at the bottom of the page.



Neighborhood Mystery

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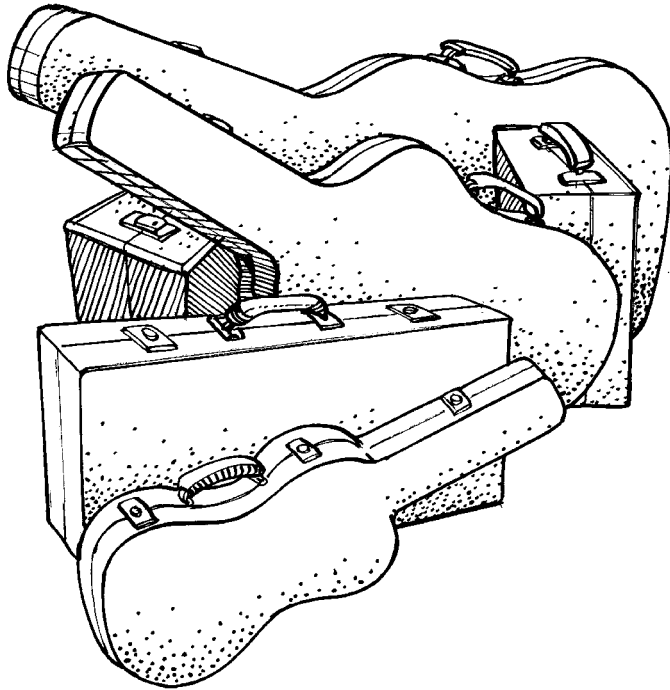
Neighborhood Mystery



Written by Roy Ramos
Illustrated by Joel Snyder

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Neighborhood Mystery



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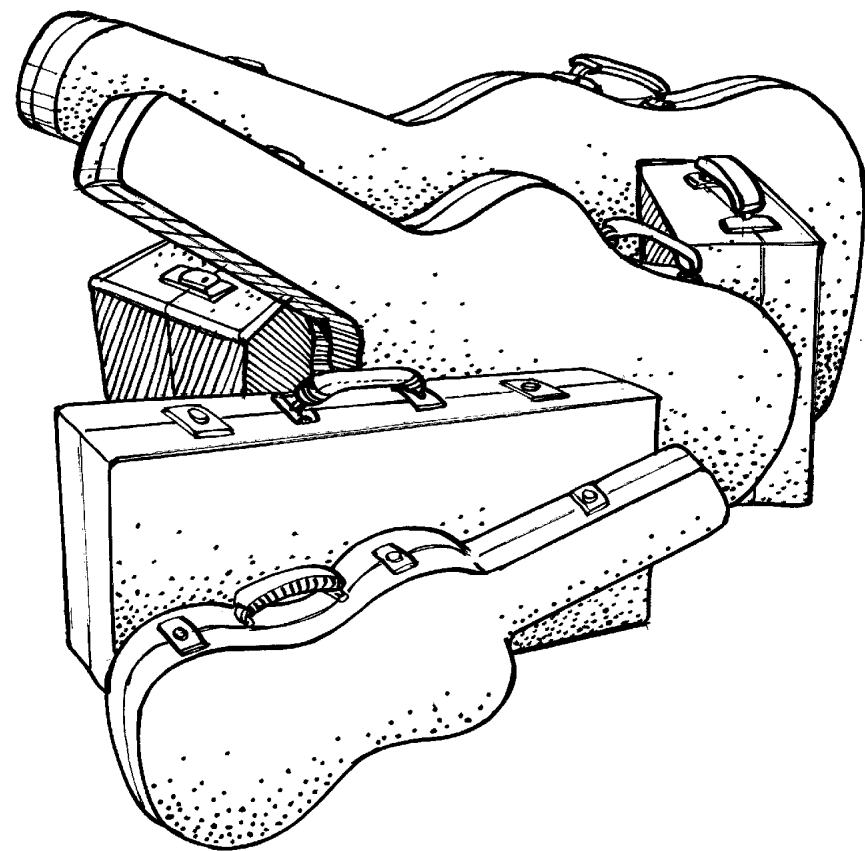


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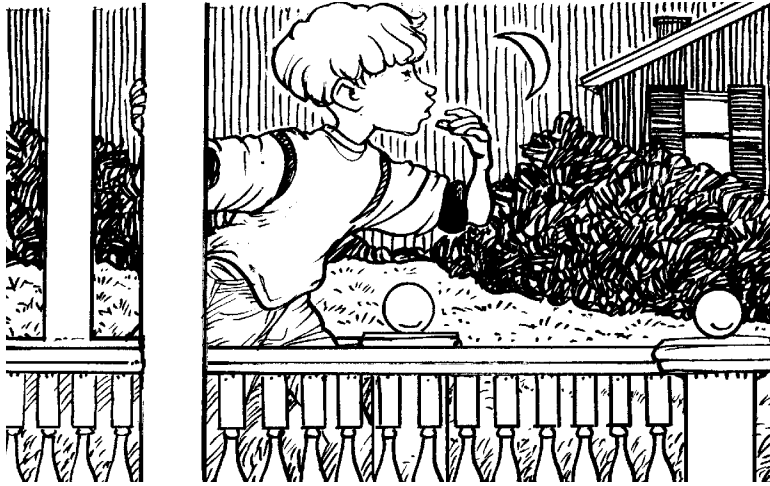
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Strange Cases

I have seen it at the same house, at the same time, every Sunday night for the last three months. A group of individuals, some of them slim, some of them stout, most of them male, but some of them female, entering this house across the street from me.

Each of them wears a similar looking uniform and carries some kind of case.





I know they are not carrying luggage. Most of the cases are too small for that. One of the cases is huge! Only some are square while others have a weird curvy shape. At 7:00 P.M., it is hard to see anything clearly—especially if your neighborhood does not have streetlights.

Aside from the porch lights and the passing cars, I can't see much of anything in the darkness.

All the people walking into the house seem to be wearing the same dark color, but down along their sides, there is a line of shiny buckles, catching flickers of light from the porch light. I wonder what it all means.

I never saw anything like this while living in Boston; but, I do remember seeing strange reports on television that might help explain things. At first, I was afraid to tell anyone at school about my neighborhood mystery because I was afraid they would think I was acting strange. But then, I got up the courage to ask my friend Maria, who lives in my neighborhood, if she knew anything about the strange happenings.





I caught her in the hallway, after school, as she was opening her locker and reaching inside. She pulled out a small case.

I froze.

She turned to look at me and saw my startled face. “What?” she exclaimed. “Haven’t you seen a violin case before?”

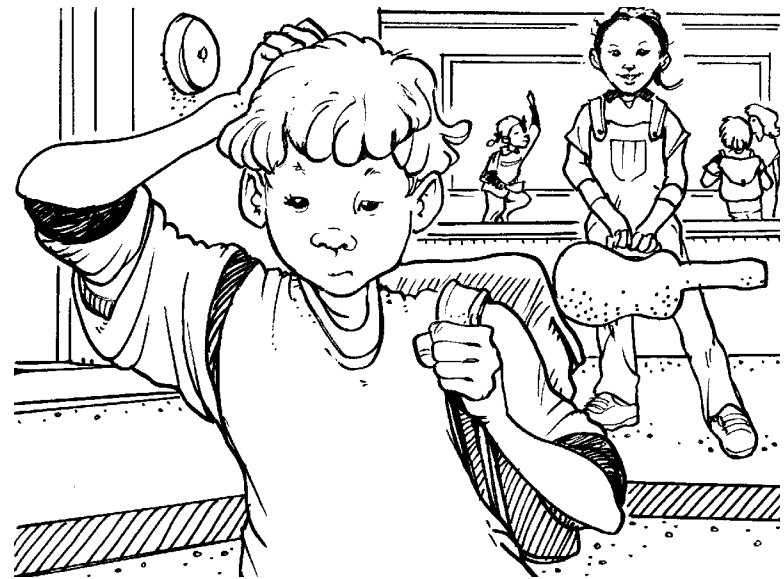
Of course, I had seen one before. After all, I was born in Boston, hometown of the one of the most famous **symphony orchestras** in the world—the Boston Pops. My family heard them play on every Fourth of July. Last year, I counted 30 violins in that orchestra! So, yes, I’ve seen my share of violin cases.

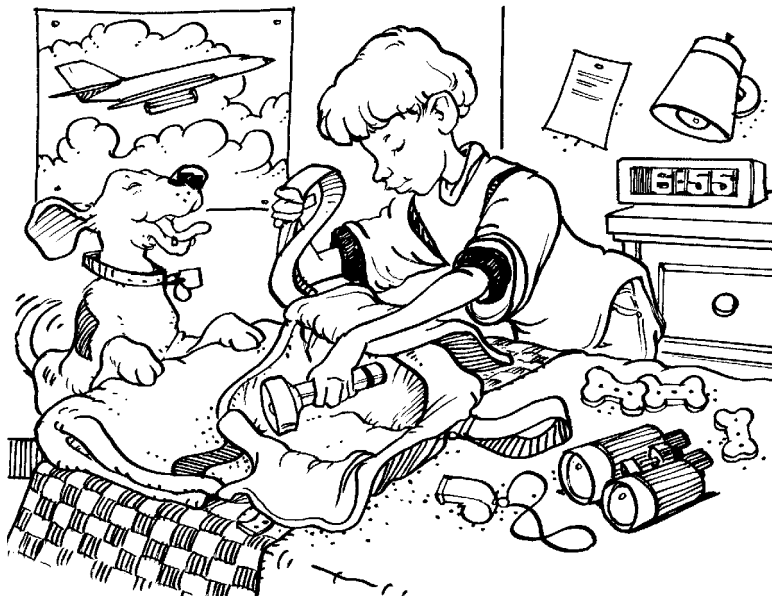
In fact, my dad rented a violin to see if I would like it, but I really wanted to play the guitar. The violin, now that I think of it, came in a case just like Maria’s. Maybe I was too busy thinking about the mystery to make the connection.

“Did you need something?” she asked.

“Never mind,” I said as I walked away confused and deep in thought . . .

Who were those people with the cases? I could not be sure. The only way to know would be to solve the mystery myself—like a detective.





My Stakeout

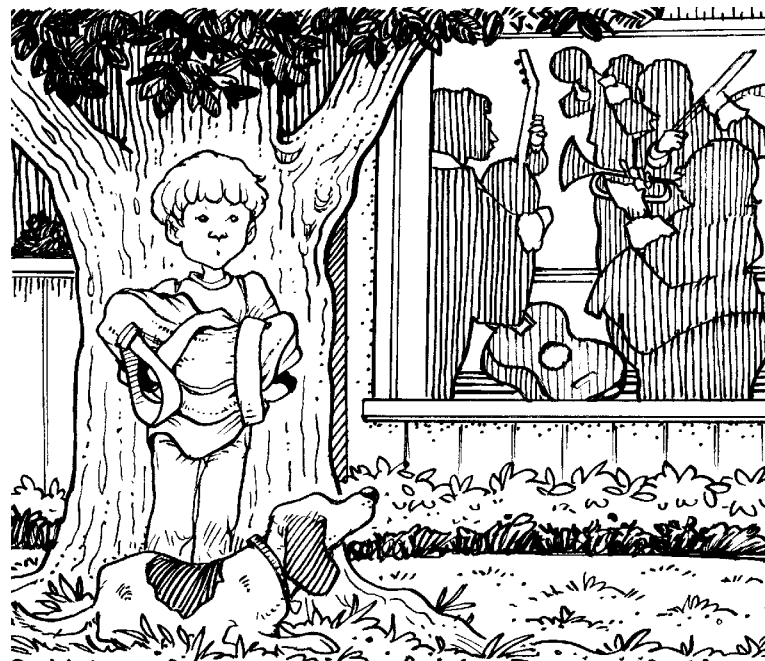
On Sunday, I made my plan and gathered up a flashlight, **binoculars**, a whistle, dog biscuits, and my dog. I waited by my window for the sun to go down. When I saw 7:00 on my clock, I knew that my detective work would begin.

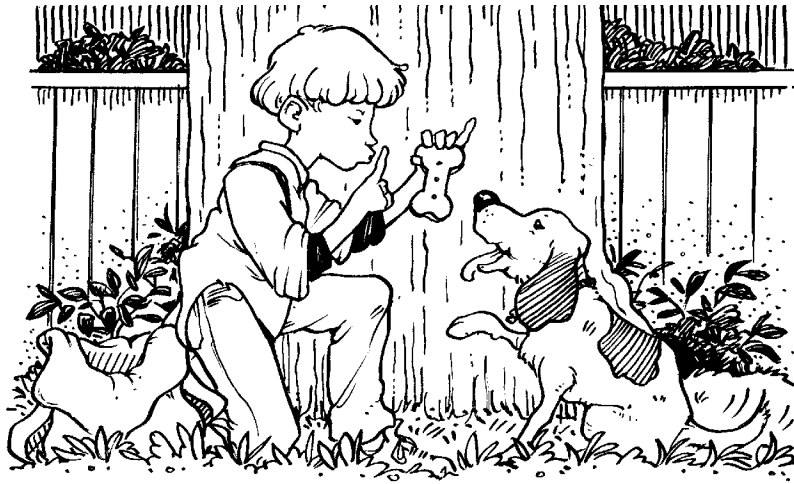
I waited until the whole group of people had gone inside because I was afraid of what might happen if anyone saw me. When all was clear, I got my things and my dog and sneaked over to the house across the street.

It's a good thing that there are big trees and bushes for me to hide behind, I thought.

I went from tree to bush to tree until I got close enough to a window to hear something. I started to hear some talking. Yet, I could not understand the language. *Maybe they were talking in code?*

Then, there was laughter. One loud, deep laugh shook me like a leaf. It sounded like some kind of **eerie** Santa Claus. It must have come from a very big man.





My dog growled like he was about to bark so I gave him a biscuit to keep him quiet. Then I heard deep string-plucking sounds that vibrated the windows of the house. Some screeching sounds followed.

These sounds reminded me of the violinists in the Boston Pops just before they performed.

Now it was starting to make sense. *They must be musicians of some kind; but, with so few of them, they could not be a symphony orchestra.* My dad once told me that the Boston Symphony Orchestra has more than 90 musicians. My thoughts were interrupted by a sudden sound, like a car horn.

My Discovery

I was sure it came from inside the house even as another car drove up. My dog started to bark like crazy. He jumped out of the bushes and pulled me with him. I accidentally turned on my flashlight. It shined on someone right in front of me. It was Maria!

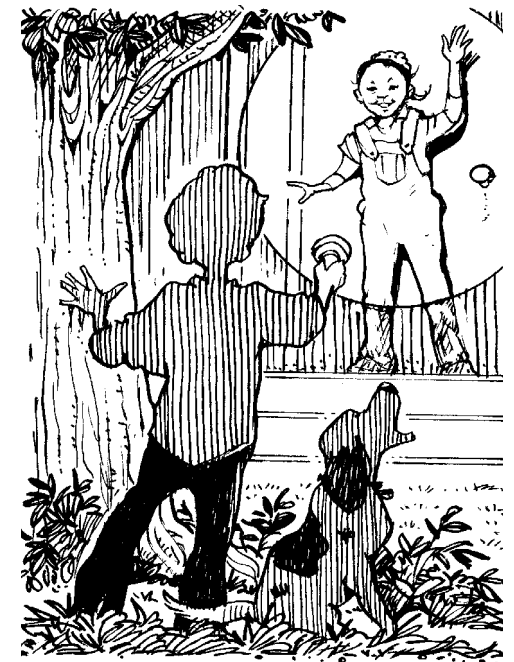
"Alan? What are you doing here?"

"Uh, I, um."

"Did you come to hear the **mariachi** at my uncle Eduardo's house?"

"Mah-ree-AH-chee? What is that?" I asked.

"It is a Mexican **folk band**. Want to come in and listen?" *Mystery solved! Case closed!* I said to myself.



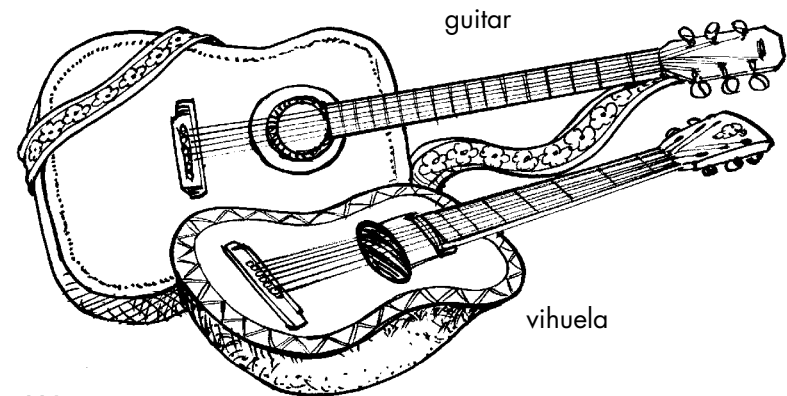
Just then, my dad came out of the garage of our house across the street to take the garbage can out to the curb. I yelled out to him asking if he wanted to hear the band of Maria's uncle, too. He smiled and yelled back to us "¡Sí!," which means yes!

Soon, we were inside sitting on the couch as we watched and listened to the mariachi group playing their **instruments**. Three members of the group played violins, another three played guitars, and two others played trumpets. One of the violinists sang and the others joined in for the chorus. We heard many mariachi songs that night. They sounded fantastic.



Mariachi songs are in Spanish. Before that night, there was only one word other than 'yes' that I knew in Spanish and that was the word *gracias*, which means thank you. That is what I told Maria when she led my father and me into the house.

I learned many new Spanish words that night. The words *violín*, *guitarra*, and *trompeta* were very easy to memorize because they look and sound a lot like the English words violin, guitar, and trumpet. The name of the huge bass guitar, *guitarrón*, was a little harder to remember. I think it funny that the smallest guitar had the most difficult name to learn—*vihuela* (vee-WEH-la). This instrument is smaller than a regular guitar but larger than those tiny guitars from Hawaii called **ukulele** (u-keh-LAY-lee).





As it turned out,
the mystery led me to
discover new things
about another culture.

I want to learn
more. So I hope
Dad will let me

take guitar lessons at school next year. When
I get good enough, I want to learn songs like
the one called *Las Mañanitas* ("The Little
Mornings"). Then I may buy a **sombrero** and
go **serenade** Maria—just like a real mariachi!

Glossary

binoculars	a device used to see far distances with both eyes (p. 9)
eerie	a strange or frightening feeling (p. 10)
folk band	a group of people who play their culture's traditional music (p. 12)
instruments	devices used to make and play music (p. 13)
mariachi	traditional Mexican folk music and one or more members of a band that performs it (p. 12)
serenade	to perform a love song to someone (p. 15)
sombrero	a large hat with a broad brim worn by ranchers in Mexico and in the American Southwest (p. 15)
symphony orchestras	a large group of musicians who play string, woodwind, brass, and percussion instruments (p. 7)
ukulele	a small Hawaiian four-stringed guitar (p. 14)
vihuela	a small five-stringed guitar with a domed back (p. 14)

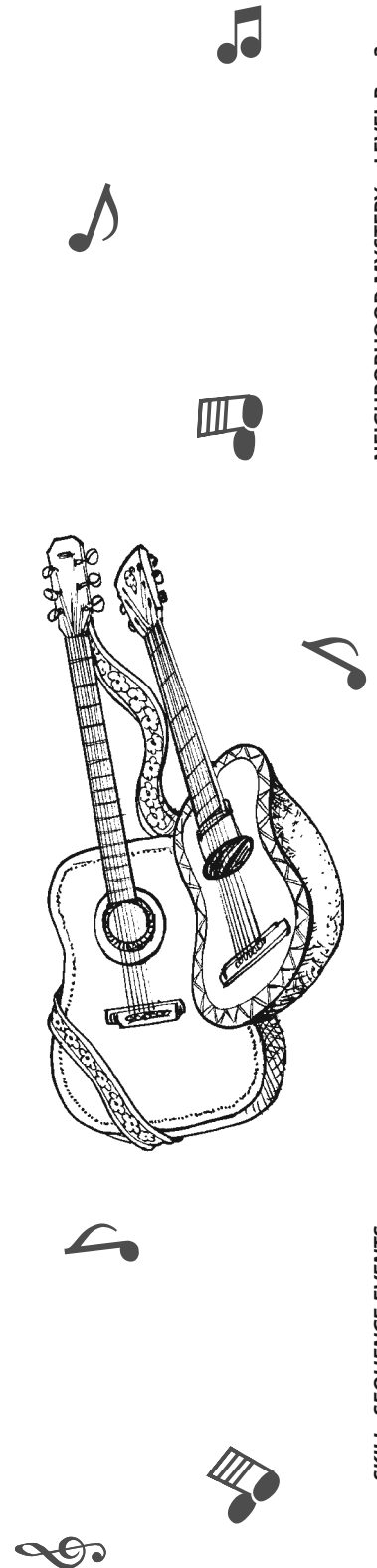
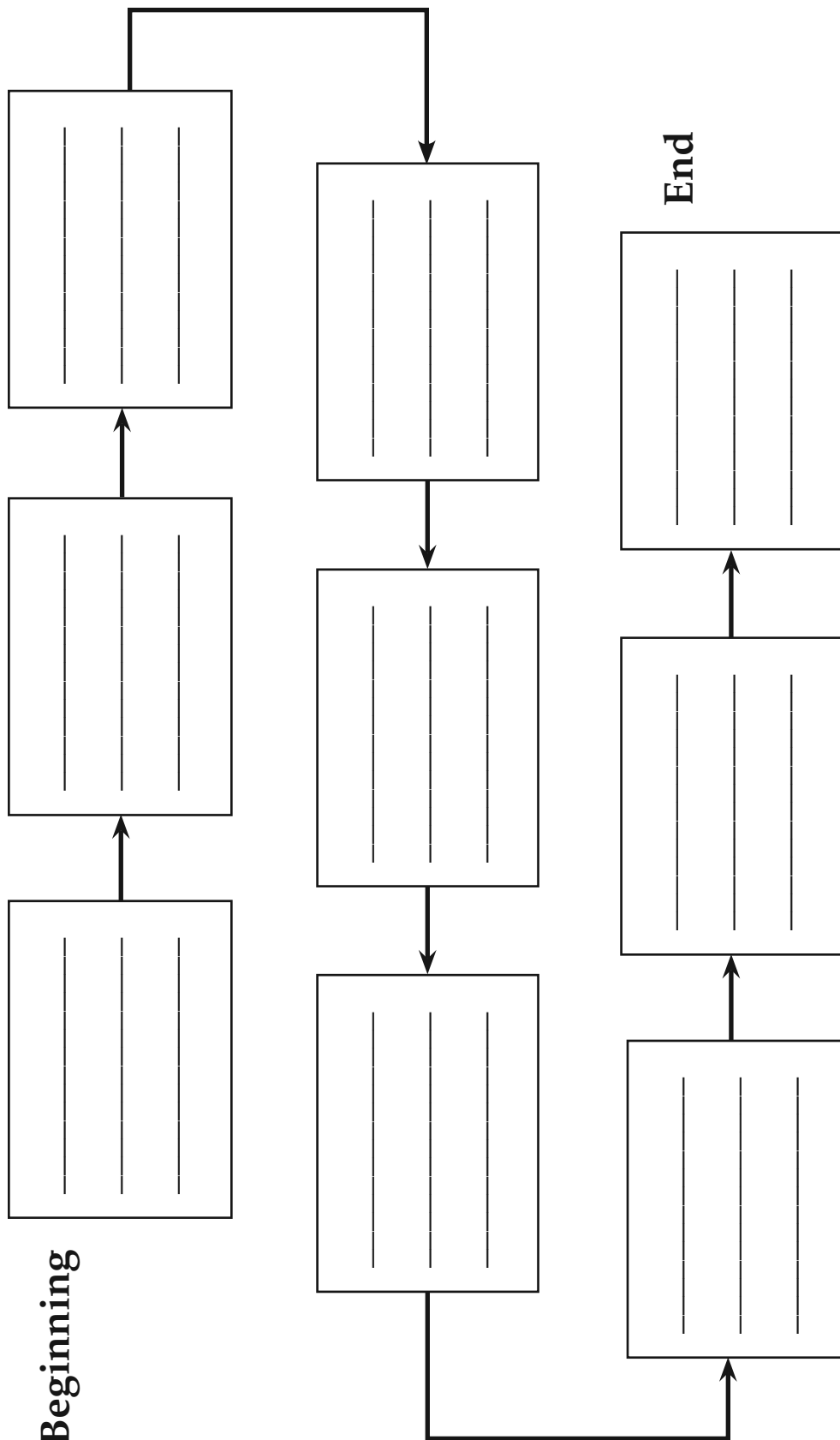
Name _____

Instructions: Make or revise predictions in the *Predict* column. Write what actually happened in the *Actual* column. If a prediction is confirmed, write a check mark next to that prediction.

Predict	Actual

Name _____

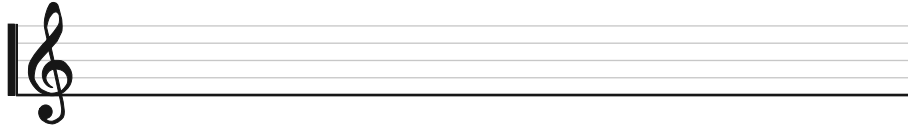
Instructions: Write what happened in the book in the order in which it happened.



Name _____

Instructions: Read each pair of words. Then put them together to form a contraction. Write the contraction on the line.

I am



we are

could not

I will

are not

she has

there is

we will

they have

should not



Name _____

Instructions: Write the letter for the English equivalent on the blank next to each Spanish word.

sí _____

gracias _____

violín _____

guitarra _____

trompeta _____

guitarrón _____

vihuela _____

Las Mañanitas _____

sombrero _____

A. The Little Mornings

B. bass guitar

C. guitar

D. thank you

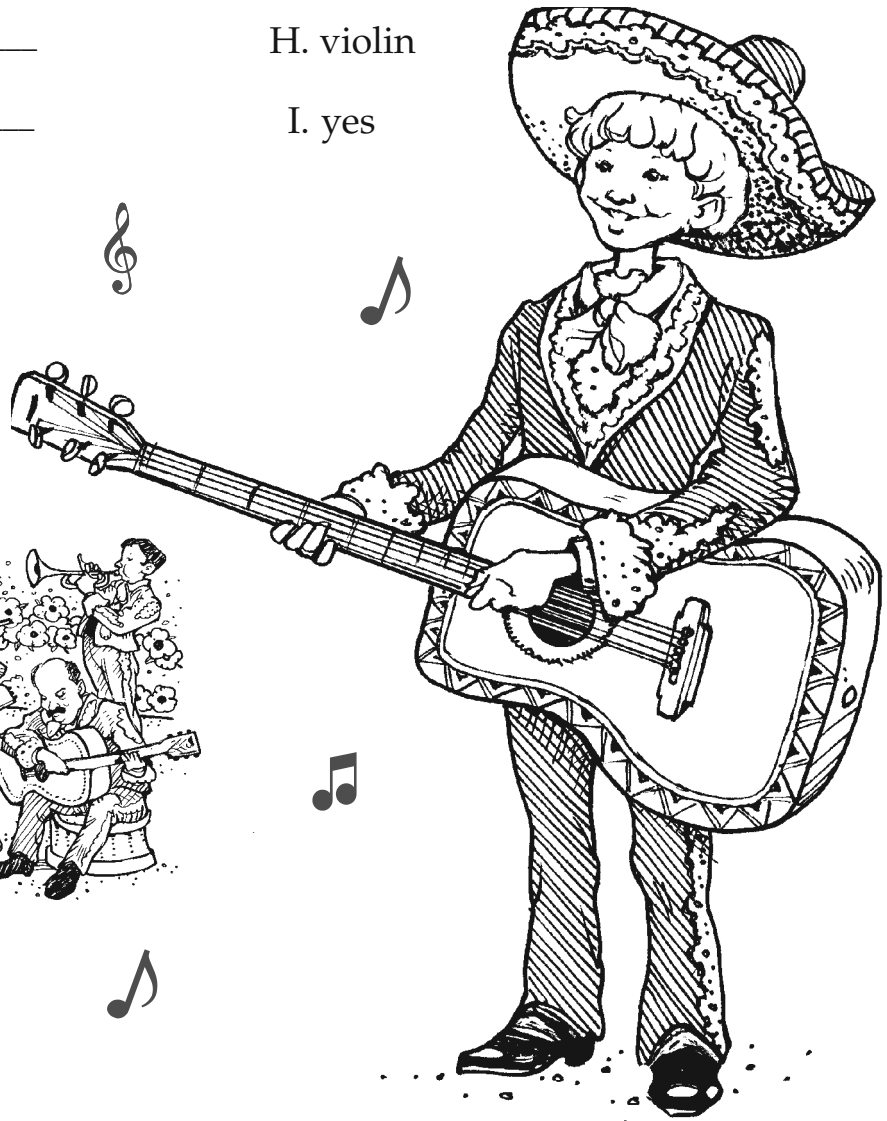
E. large hat

F. small guitar

G. trumpet

H. violin

I. yes



Two Artists: Vermeer's Forger

A Reading A-Z Level R Leveled Reader

Word Count: 1,147



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Front cover: Jan Vermeer's painting, *A Young Woman Seated at the Virginal* sold at auction in 2004 for \$27 million.

Back cover: Vermeer's painting, *Girl at a Window Reading a Letter*

Title Page: Vermeer's painting, *Girl in a Turban*

Two Artists: Vermeer's Forger
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Jan Vermeer's painting, *View of Delft*, from 1661, shows the city 200 years before Han lived.

Great Masters

When Han Van Meegeren was a young child in Holland, he loved to draw. He enjoyed visiting museums and gazing at pictures by Dutch artists. The great painters Rembrandt and Vermeer had died more than 200 years earlier, but their paintings lived in Han's mind.

Han longed to spend his life as an artist. If only he could paint like those great Dutch **masters**. If only he could spend his life mixing colors and creating beautiful pictures. If only. . .

Van Meegeren's First Paintings

In 1908, when he was nineteen, Han began studying architecture. He designed a few buildings, but he still loved art, painting, and the great Dutch masters. So he quit architecture and began to study art.



These scenes of Delft in 1904 show buildings Han might have studied as an architecture student.



At first he did very well. He graduated from art school and was hired to teach other students. He even won some awards for his painting skill.

As time went by, Han did not work as hard, and many **critics** did not like his work.

They said his work followed the old masters too closely. They said he had no **talent**. The bad reviews that these critics wrote about Han made him sad and very angry.



These paintings from the Dutch Golden Age show some of the techniques that inspired Han's work.

Han could not stop thinking about the critics. He wrote angry letters, but that was not enough. There had to be some way to get back at them. He wanted to fool and **embarrass** them the way they had embarrassed him.

An idea formed in Han's mind. What if he were to paint a picture and say the great artist Johannes Vermeer had painted it? Could he fool the critics into thinking his **forgery** was a genuine Vermeer painting? Would they praise it as they did Vermeer's other work? Han imagined what the critics would say when they found out he had painted it.

Artist Timothy Cole praises Vermeer's work.

The Century Magazine, 1877

But it is in Vermeer's small works that he appears as an independent master, and we become acquainted with an artist whose genius is akin to that of De Hooch and Metsu—a master of robust and refined intellect. I shall never forget the "Milkmaid" of the Six collection at Amsterdam, which is extraordinary in its naturalness, truth, breadth, and reality, without excess, and is notable for its brilliancy of tone, harmony, and solidity of touch.

One of the latest acquisitions of the National Gallery of London is a very fine Vermeer, which is the subject of the frontispiece of this number of *THE CENTURY*, namely, the "Portrait of a Lady standing at a Spinnet." It is a small work, measuring about 11 by 15 inches, and cost the gallery £1700. It possesses a very charming and realistic effect of light coming in through the window. The varied adjustment of the spaces in the arrangement of the whole is a study in itself; and the use of so many angles—right, obtuse, and acute—serves to enhance the graceful lines of the figure.

In coloring it is softer and more refined than many of Vermeer's works that I have seen. The wall, suffused by the warm radiance from without, is a neutral gray of great delicacy of tone, and the gold frame of the little picture sparkles upon this background with piquant realism. The black frame surrounding the picture of the Cupid is nearly the strongest note of color in the whole. I have heard an artist of distinction as a colorist remark that only a consummate master would dare to balance the masses as Vermeer has done. The spinnet is brown, and the dress of the lady is a warm, pearly gray, the part about her shoulders and breast being of a rich blue, while the seat of the chair is of the same shade. The Cupid is holding in his uplifted hand a clock, the pendulum being just visible as it swings from behind his arm. There doubtless is some relation here between Love and the lady in the sentiment pervading the whole.

T. Cole.

Copying a Master

Han knew a great deal about art and life during the years that Vermeer was painting. He was a smart man, and he knew that a **convincing** art forgery required many things. The subjects of the painting had to look as if they were from the time period when Vermeer lived. The paint and canvas also had to appear old. But most of all, his painting **technique** had to reflect Vermeer's **style**.



Vermeer's painting, *Lady and Gentleman Drinking Wine*, shows the clothing and furniture of wealthier people when Vermeer lived.

To start, Han needed to find and use a seventeenth-century painting that was more than 200 years old. Once he had found it, he cleaned the canvas, making sure to leave behind the aging cracks in the lower white paint layer. Old paintings have tiny crack lines.

Han worked on his painting for a long, long time. He chose subjects based on what the art critics might expect Vermeer to paint. Vermeer painted pictures of life during the late 1600s. If Han were going to paint Vermeer forgeries, he

would have to learn a lot about life during that time. For instance, he would have to know how people dressed and wore their hair.



Vermeer's *The Milkmaid* shows a servant in humble clothes.



The Disciples at Emmaus shows details that point to Vermeer as its painter, but it is the work of forger Han Van Meegeren.

Han also chose his paints and brushes very carefully, using only brushes and colors identical to those used by Vermeer. Sometimes, he ground and created his own paints when he needed blues that were only made a certain way 200 years before. Also, since paints take many, many years to harden, he probably added a chemical to his paints to make them dry quickly. He also added a **varnish** that made the entire painting appear a bit old and dusty.

When he was finished, Han Van Meegeren called his painting *The Disciples at Emmaus*.

Master of Success

Han's first forgery was a success. Everyone believed that his painting was actually painted by Vermeer. He was able to sell it for a great deal of money. Best of all, the critics praised it.

Han planned to tell the critics he had painted the picture but decided against it. Han was a greedy man, and he had been paid much more than he expected. So he decided to paint more forgeries and get very, very rich.



Artist Han Van Meegeren became rich by forging paintings based on masters from the Dutch Golden Age.



Works by Pieter de Hooch (above) and Frans Hals (right)—Han forged paintings by both.



Han studied Vermeer's real paintings carefully as he painted more forgeries. Every detail would have to be correct so the critics would not realize the paintings were fakes. Han painted and sold several "Vermeer" paintings, and he did become quite rich.

Forgery Uncovered

Like many criminals, Han became lazy. One of his forgeries was sold to a high-ranking Nazi official during World War II. The Dutch and Nazis were enemies, so after the war Han was nearly jailed for life for selling a Dutch **national treasure** to the enemy. He confessed the painting was a forgery. He painted a new “Vermeer” to prove he had done what he said and was punished with just two years in jail. However, before Han could go to jail, he died.



Han paints *Teaching in the Temple* during his trial to show how he forged the Vermeer paintings.



This forgery in the style of Vermeer is the one that got Han caught.

Vermeer's style and technique took Han many years to master. Vermeer was a **genius** at using light. In his paintings, light often comes through a window and shines on tiny details.

He was also a genius at showing the mood of his subjects and creating a feeling. He often chose soft colors to create the feeling of the painting.

Han's mastery of Vermeer's techniques cast a shadow over Vermeer's real works. Which ones were real, and which ones might be fakes?

What Is Her Mood?

In Vermeer's *The Guitar Player* the girl seems to glance up shyly. Can you guess what she might be thinking?

The Guitar Player

c. 1672;

Oil on canvas,
53 x 46.3 cm;

Kenwood,
English Heritage



The Real Vermeer

In 1993, a man came to a famous art house with a painting called *A Young Woman Seated at the Virginal*. He wondered whether it was a real Vermeer, or whether perhaps the famous



This 1661 virginal is an instrument similar to a modern piano.

art forger Han Van Meegeren had painted it. The art house agreed to investigate the painting.

Like Han, the experts from the art house studied the paints and brushes used by Vermeer in his other paintings. They used microscopes and X-rays to uncover brush strokes. But what they found most interesting of all was the small canvas on which the picture was painted. The coarse canvas was the same as the one used in Vermeer's *The Lacemaker*.

Do you think that *A Young Woman Seated at the Virginal* is a real Vermeer or a forgery?



The Lacemaker

c. 1669-1670

Oil on canvas
transferred to
panel

23.9 x 20.5 cm
(9 13/32
x 8 1/2 in.)

Musee du Louvre,
Paris

A Young Woman Seated at the Virginal

c. 1670

9 7/8 x 7 7/8 in.
(25.2 x 20 cm.)

Art Gallery
of Wynn,
Las Vegas

Las Vegas,
Nevada



Folds in the lady's dress in Vermeer's *Mistress and Maid* showed experts more examples of how Vermeer painted.

When the experts were done with the techniques, they turned to the style of the painting. They compared the painting to other Vermeer paintings of girls playing musical instruments, and they compared the folds in the skirt and other details to Vermeer paintings, such as *The Guitar Player*.

Then they cleaned the painting and found their answer in the cool lighting, the shadows, the wall, and the mood.

Famous forgeries like those painted by Van Meegeren changed the way art experts examine a painting. Experts have determined Vermeer painted about thirty-five known works of art. No one but Vermeer could have painted *A Young Woman Seated at the Virginal*.

Johannes Vermeer used light brilliantly. His colors were soft and gentle, and he chose them to create a mood or show a moment in time. He enjoyed painting the people he saw around him every day. He was a genius at expressing their feelings. What feelings do you see in Vermeer's paintings?



Vermeer's *Girl at the Window Reading a Letter*

Glossary

convincing (<i>adj.</i>)	believed to be true or real (p. 8)
critics (<i>n.</i>)	people who find faults or carefully judge for review (p. 6)
embarrass (<i>v.</i>)	to make to feel awkward, uneasy, or self-conscious (p. 7)
forgery (<i>n.</i>)	an illegal copy of something that was made with the intent that it look genuine (p. 7)
genius (<i>n.</i>)	someone with a tremendous skill or talent in a particular area (p. 14)
masters (<i>n.</i>)	people with great skill or influence in a particular trade or craft who are qualified to teach others (p. 4)
national treasure (<i>n.</i>)	something or someone of great value to a particular country or nation's heritage (p. 13)
style (<i>n.</i>)	a distinctive artistic form such as in music, art, or literature (p. 8)
talent (<i>n.</i>)	a natural ability or skill (p. 6)
technique (<i>n.</i>)	a skillful way of performing or doing something (p. 8)
varnish (<i>n.</i>)	a liquid used to give something a protective coating or gloss (p. 10)

Name _____

Instructions: As you read, list causes in the left-hand column and their effect in the right-hand column.

Cause	Effect

Name _____

Instructions: Identify and list the important events from the reading in the *Important Event* boxes. Then use the information to create a summary in the *Summary* box.

Important Event	Important Event	Important Event	Important Event

TWO ARTISTS: VERMEER'S FORGER • LEVEL R • 2

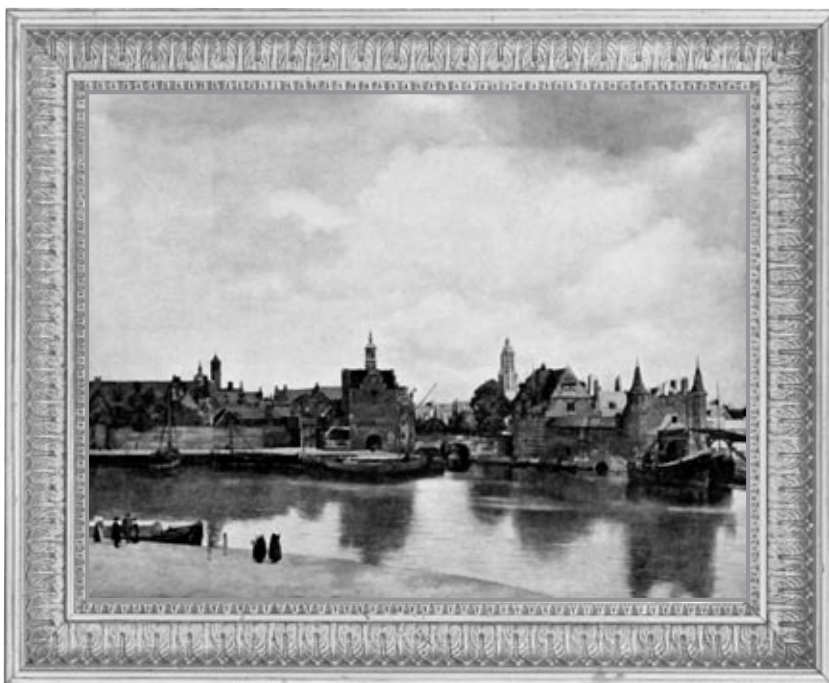
Summary

SKILL: SUMMARIZE

Name _____

Instructions: Read the sentences below and add a comma to each one to separate the introductory words from the rest of the sentence.

1. For instance he would have to know how people dressed and wore their hair.
2. But most of all his painting technique had to reflect Vermeer's style.
3. Sometimes he ground and created his own paints when he needed blues that were only made a certain way 200 years before.
4. Also since paints take many, many years to harden, he probably added a chemical to his paints to make them dry quickly.
5. As time went by Han did not work as hard, and many critics did not like his work.
6. Best of all the critics praised it.
7. Like many criminals Han became lazy.
8. When he was finished Han Van Meegeren called his painting *The Disciples at Emmaus*.



Name _____

Instructions: Add the correct suffix to the italicized word in each sentence. Rewrite the new word on the line provided.

1. Han *work* on his painting for a long, long time. (ed, ly) _____
2. He *confess* that the painting was a forgery. (ed, ly) _____
3. Johannes Vermeer used light *brilliant*. (ed, ly) _____
4. He *enjoy* painting the people he saw around him everyday. (ed, ly) _____
5. They said his work followed the old masters too close. (ed, ly) _____
6. Han *long* to spend his life as an artist. (ed, ly) _____
7. Han was *near* jailed for life for selling to the enemy. (ed, ly) _____
8. Han *paint* and sold several "Vermeer" paintings. (ed, ly) _____



Only One Aunt Maggie

A Reading A-Z Level R Leveled Reader

Word Count: 1,310




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LEVELED READER • R

Only One Aunt Maggie



Written by Alyse Sweeney
Illustrated by Joel Snyder

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DRA	34

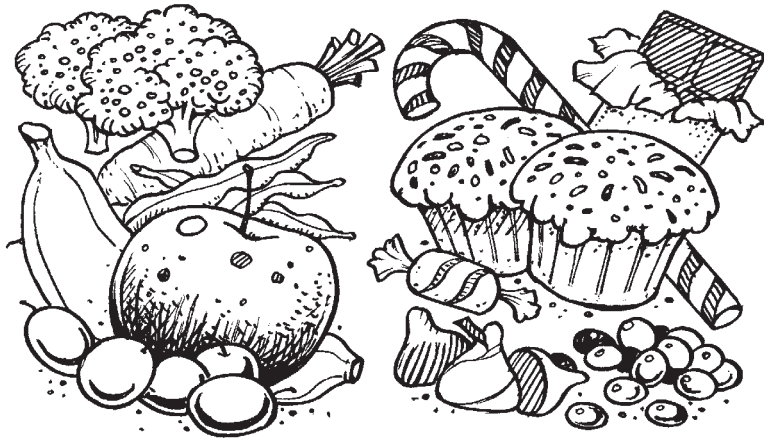


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Aunt Maggie Is Coming!

"Guess who called today to say she is due for a visit?" Adam's mom squealed. Before Adam or his dad had time to guess, Adam's mom answered her own question. "My sister! Aunt Maggie is coming *this* weekend!"

"Whooo-hooo!" Adam chanted, waving his arms over his head.

"Well, I can see you're terribly upset over this news," Dad chuckled, serving himself salad.

That evening, the Wiles family laughed up a storm sharing Aunt Maggie stories.

“Remember last year when Aunt Maggie came into my second-grade class and helped us bake a three-foot high volcano cake—that erupted?” Adam recalled.

“Or the time she got all of us to do that ridiculous cheer at your soccer game?” added Dad.

There was one thing that the Wiles family knew for sure—Aunt Maggie was the most fun person they knew.



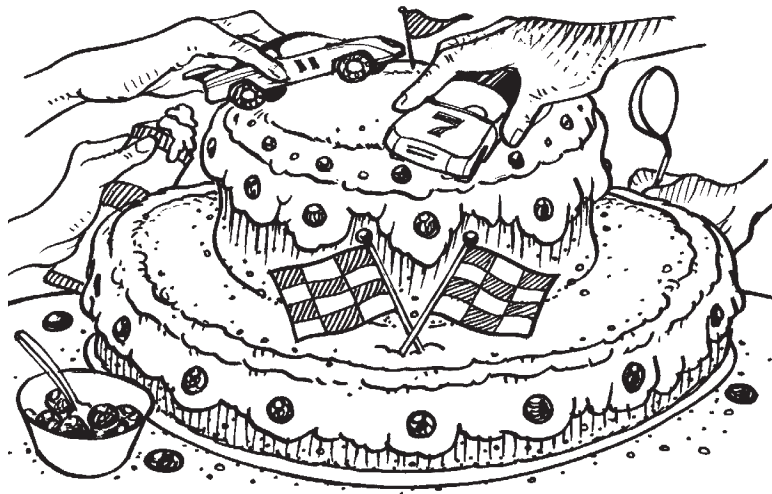
Summon Your Building Partner!

When Aunt Maggie arrived on Friday, she eagerly unpacked toys from her **recent** trip to Russia and her latest picture book that she wrote and illustrated. Then she cupped her hands to her mouth and announced, “It’s fort time—**summon** your building partner!”

“Yahooo!” roared Adam, running to call Dario, who lived next door.

An hour later, Aunt Maggie and the boys built a pillow, cushion, and blanket fort **spanning** two rooms. “We said we’d break last year’s fort record—and we did!” Dario proudly announced.





A Day of Painting and Baking

The next morning, Adam made his Saturday morning specialty—buckwheat pancakes with bananas.

After breakfast, Dario came over for a day of painting and baking. Aunt Maggie taught the boys a fancy brush stroke for making **realistic**-looking clouds.

After lunch, the **trio** baked a racetrack cake—topped with race cars from Adam’s car collection!

“Your aunt is so cool,” Dario told Adam before heading home for dinner.

Aunt Maggie’s Travel Stories

After dinner at Adam’s house, the family gathered to hear Aunt Maggie’s travel stories. The family room was set up like a theater, with Aunt Maggie seated in a chair facing her audience. Everyone’s eyes were glued to Aunt Maggie as she spoke, and everyone’s hands were busy popping grapes in their mouths.

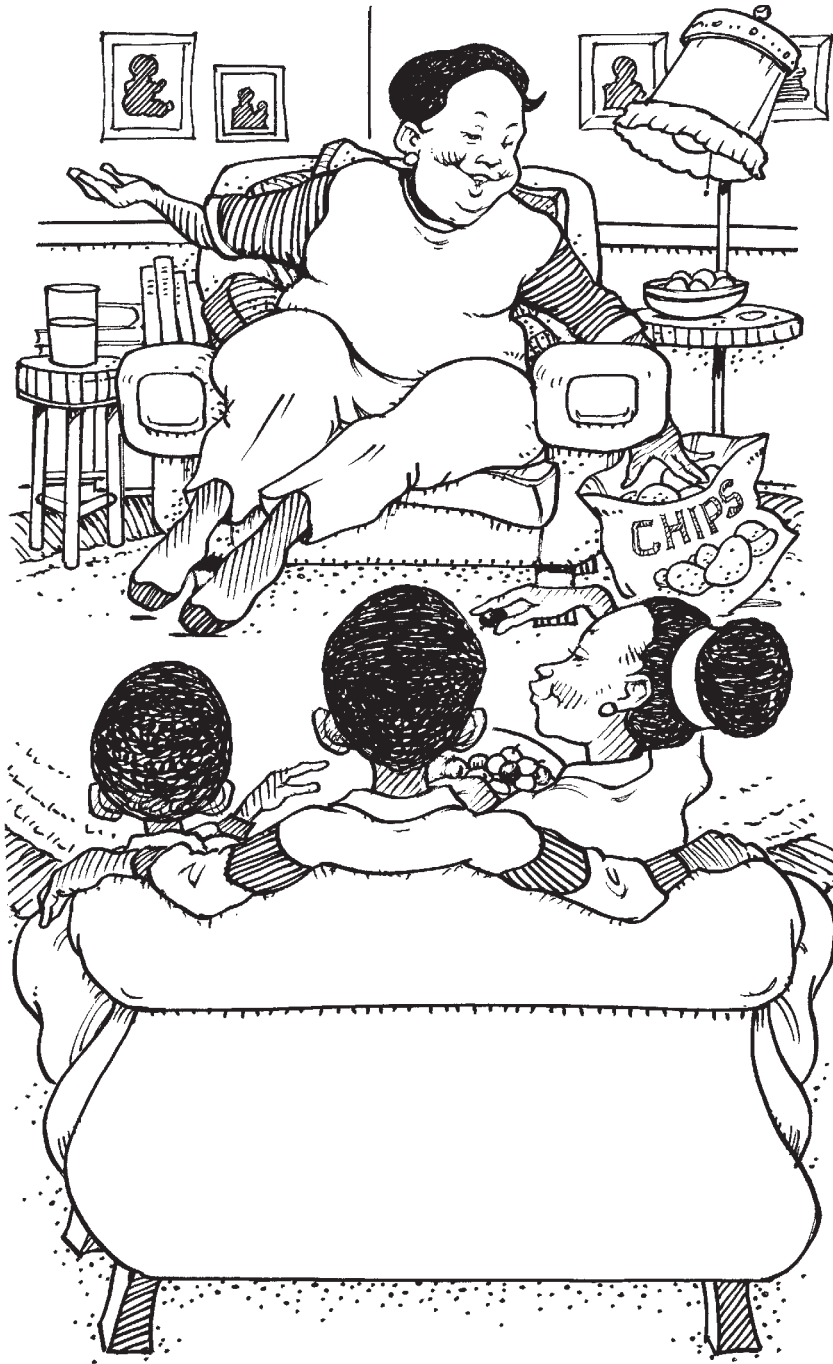
“Can I get anyone more grapes?” Adam’s mom asked between stories.

“No, thank you,” said Aunt Maggie. “But do you have any chips?”

“Not today,” mom replied.

“Well, you know me,” said Aunt Maggie, pulling a bag of chips from her tote. “I never leave home without my two favorite foods, chocolate and chips!”

Then she told of an ice sculpture festival where she saw an ice lion as tall as the ceiling. And an ice castle as big as the house!



Is She Okay?

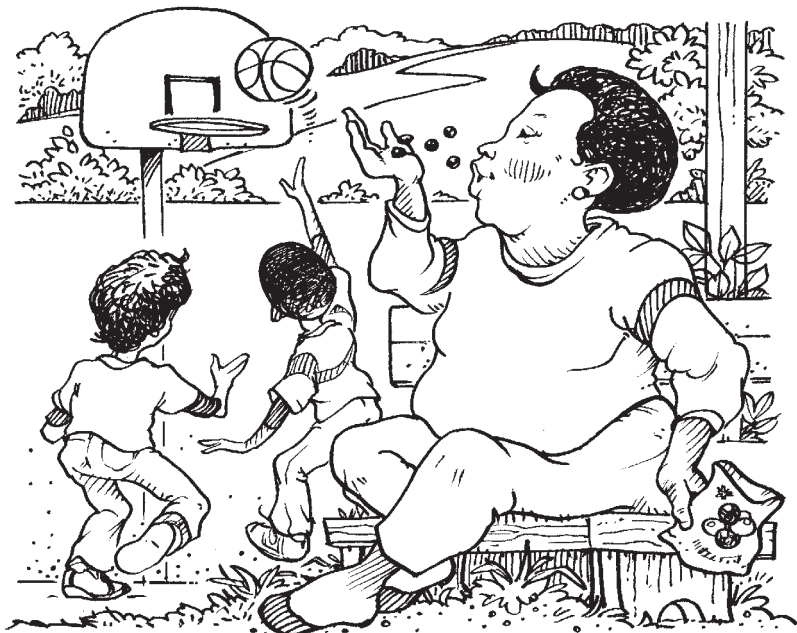
The next morning, Aunt Maggie accompanied Adam and Dario to the park six blocks away.

“Whew . . . how much longer, kiddos?” Aunt Maggie asked, wiping her damp brow.

“Just three more blocks,” answered Adam. He noticed that she was sweating a lot for a cool day and that her face was quite red.

“Your aunt looks as if she just ran a **marathon**—is she okay?” Dario whispered to Adam. Adam wasn’t so sure.





When they reached the park, Aunt Maggie sat on a bench. When she caught her breath, she took out a small handful of colored chocolates and called out, “Chocolate, anyone? I sure need a sweet treat after all that exercise!”

On the walk home, Aunt Maggie breathed even heavier and walked even slower. When the boys questioned her about being so tired, she explained, “Well, I’m overweight and out of shape. So now a ten-minute walk can really wipe me out! In fact, I’m going to lie down when we get home, kiddos.”

Adam’s Thoughts Drift to Science Class

As the boys made turkey sandwiches for lunch, Dario talked about dog tricks he was learning. But Adam’s thoughts kept drifting to science class. And it was Saturday!

“Remember when Ms. Scott told us that the heart is a muscle that needs exercise just like other muscles?” Adam spoke slowly. “And remember when she showed us that picture of **arteries** clogged with fat?”

“Yeah,” said Dario.

“Well, I think that must be how Aunt Maggie’s arteries look, which means that it’s harder for blood to get to her heart, which—”

“—is not a good thing,” Dario said, frowning.

Adam couldn’t imagine anything bad happening to Aunt Maggie. “We’ve got to do something, but what? What can we do?” Adam crunched on a carrot, eyebrows **furrowed**.



"You know, my dad lost about 25 pounds last year," shared Dario. "His doctor told him that if he didn't, he could get heart disease."

"Really?" Adam asked, leaning in. "How did he do it?"

"Well, he started walking Buddy after dinner every night. And he actually eats a lot of the same meals as before, but now my mom makes them with healthier ingredients." Dario explained how his mom now makes cheeseburgers—one of his dad's favorites—with wheat buns, lean beef, low-fat cheese, and tomato slices.

"Yeah, my mom makes brown rice now instead of white rice," added Adam. "And she buys wheat bread instead of white bread. It's not so bad once you get used to it."

"Also, no more doughnuts for breakfast or chips with lunch. Now our family only eats that kind of food on Junk Food Fridays for Game Night."

"Ooohh! Junk Food Fridays sound cool," said Adam.

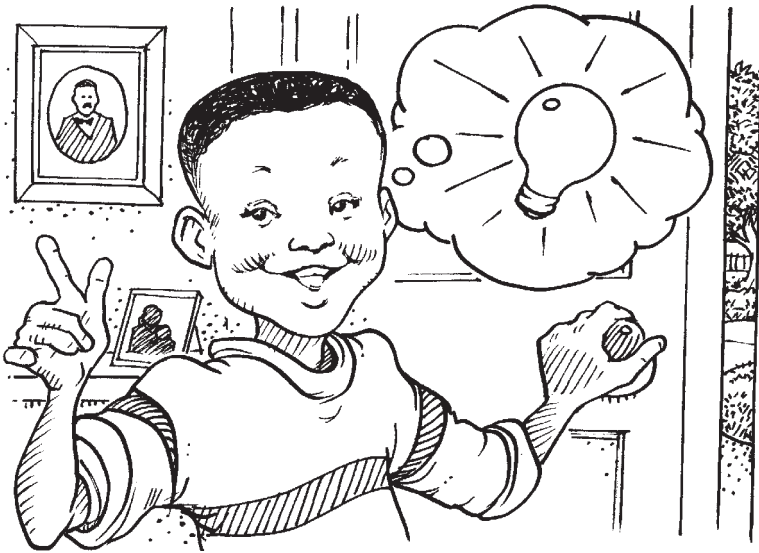
Let's Do It!

"So your dad lost weight by walking the dog after dinner and eating junk food once a week instead of every day," Adam thought aloud. "And he ate healthier ingredients in his favorite meals, right?"

"Yup," said Dario.

"Well, if your dad can do it, so can Aunt Maggie!" Adam exclaimed. "We can tell her how he did it so she can do it, too."

"Like make her a chart, or something?" asked Dario.



"Great idea! Let's do it!" Adam said, heading out the door. "Is your dad home? We'll need his help."

Dario grabbed his hat and followed Adam. "Let's do it!" he called to Adam's back.

Adam, Dario, and Dario's dad listened to the baseball game on the radio as they created the poster. Along the top of the white poster board, Dario drew funny pictures of Aunt Maggie making faces while lifting weights and power walking.

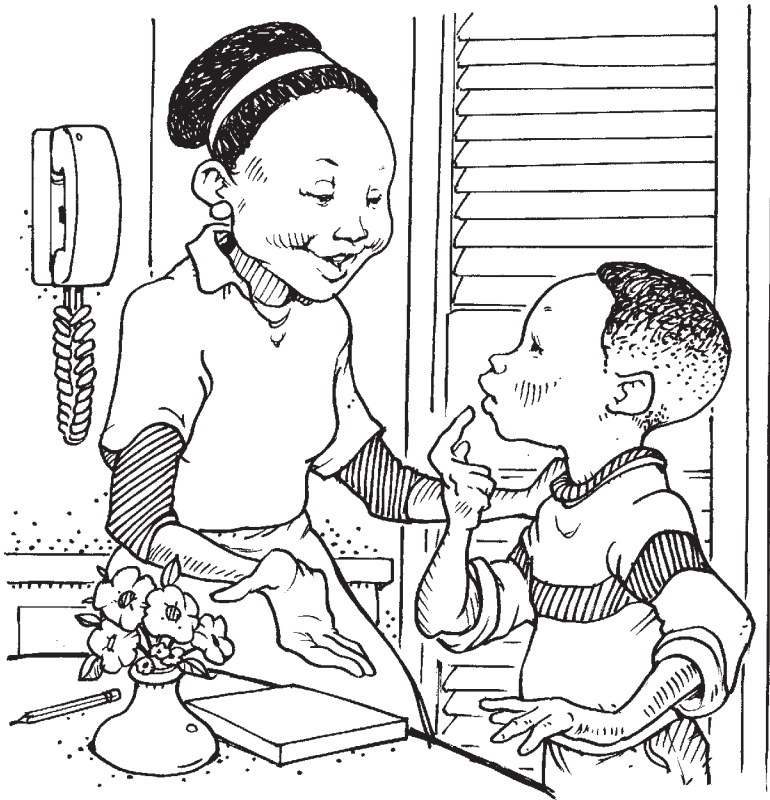
Below the illustrations, Adam wrote a list of less healthy foods in one column, like white flour tortillas, hot dogs, and mashed potatoes. And Dario's dad wrote the healthier **alternative** in the other column, like wheat tortillas, soy dogs, and baked sweet potatoes.

When they finished, Dario's dad **dictated** to Adam a list of foods that he ate when he **craved** junk food. Along the bottom of the poster, Adam wrote, *If you crave crunchy chips, try some nuts, carrot sticks, or a rice cake. If you crave sweet chocolate, try a fruity yogurt, Jello, or dried fruit.*

Tell Her What's in Your Heart

As Adam headed back to his house with the poster, he felt excited—and nervous, too. *What if the poster makes Aunt Maggie angry? What should I say to her when I give her the poster?*

After dinner, Adam went to his mom for advice. “Just tell her what’s in your heart, Adam,” she said.



That night when Aunt Maggie came by Adam’s room to say goodnight, he handed her the poster. “Aunt Maggie, you are the coolest, funniest, most amazing grown-up Dario and I know. And we made you this poster because we *really* love you and don’t want anything bad to happen to your heart.”

“My heart?” Aunt Maggie repeated, looking confused.

I Have Only One Me

As she read the poster, a happy tear rolled down her cheek. "Kiddo," she said. "Tonight I **pledge** to you and Dario that I will take this poster home with me, and I will follow it. Because after all, I only have one me, right? Besides, this healthy food list doesn't look *that* bad. Now get to bed so you can take me to the airport in the morning. And Adam, thank you, and Dario, too."

Three months later, Adam opened this letter from Aunt Maggie . . .



Glossary

advice (<i>n.</i>)	suggestions about a decision or action (p. 17)
alternative (<i>n.</i>)	a choice or possibility (p. 16)
arteries (<i>n.</i>)	the blood vessels that move blood away from the heart to all parts of the body (p. 12)
crave (<i>v.</i>)	to want something a lot (p. 16)
dictate (<i>v.</i>)	to speak or read for someone else to write down (p. 16)
furrowed (<i>adj.</i>)	wrinkled (p. 12)
lean (<i>adj.</i>)	having very little fat (p. 13)
marathon (<i>n.</i>)	a long-distance running race about 26 miles (42 km) long (p. 18)
pledge (<i>v.</i>)	to promise (p. 19)
realistic (<i>adj.</i>)	like or similar to real life (p. 7)
recent (<i>adj.</i>)	done, made, or happening not long ago (p. 6)
spanning (<i>v.</i>)	reaching or extending across (p. 6)
summon (<i>v.</i>)	to call someone or something to you (p. 6)
trio (<i>n.</i>)	a group or set of three (p. 7)

Name _____



Instructions: Write a prediction in the *Make* column. Revise the prediction as you read in the *Revise* column, and put a check mark in the *Confirm* column if you can confirm your prediction after reading. Write the events that actually happen in the *Actual* column.

Make	Revise	Confirm	Actual

ONLY ONE AUNT MAGGIE • LEVEL R • 1

SKILL: MAKE, REVISE, AND CONFIRM PREDICTIONS

Name _____

Instructions: Use clues from the book and what you already know to make inferences about "*Only One Aunt Maggie*."

Story Clues	+	What I Know	=	Inference

ONLY ONE AUNT MAGGIE • LEVEL R • 2

SKILL: MAKE INFERENCES

Name _____

Instructions: Read the sentences below and decide whether they contain dashes or hyphens. Then write *dash* or *hyphen* on the short line to the left of the sentence. If the sentence does contain a dash, on the lines below the sentence, explain how it is used (to clarify information, to add a thought, or to indicate a break or interruption).

1. _____ There was one thing that the Wiles family knew for sure—
Aunt Maggie was the most fun person they knew.

2. _____ “We said we’d break last year’s fort record—and we did!”

3. _____ Adam made his Saturday morning specialty—buckwheat
pancakes with bananas.

4. _____ Aunt Maggie taught the boys a fancy brush stroke for
making realistic-looking clouds.

5. _____ After lunch, the trio baked a racetrack cake—topped with
race cars from Adam’s car collection!

6. _____ “So now a ten-minute walk can really wipe me out!”

7. _____ “That must be how Aunt Maggie’s arteries look, which
means that it’s harder for blood to get to her heart, which—”

8. _____ “—is not a good thing,” Dario said.

9. _____ “You are the coolest, funniest, most amazing grown-up
Dario and I know.”

10. _____ She also uses wheat buns, low-fat cheese, and tomato slices.

Name _____

Instructions: Match words from the left-hand column with words from the right-hand column to create compound words found in *Only One Aunt Maggie*. Then write the compound words you created on the lines at the bottom of the page.

buck

race

every

over

eye

junk

hot

good

second-

realistic-

break

race

any

ice

ten-

cheese

base

rice

grown-

thank

dogs

looking

one

track

night

brows

grade

minute

ball

weight

food

one

you

cars

thing

castle

cake

burgers

up

fast

All About Kites

A Reading A-Z Level N Leveled Reader

Word Count: 768




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All About Kites
Level R Leveled Reader
© Learning A-Z, Inc.
Written by Elizabeth Austin
Illustrated by Maria Voris

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Reading Recovery	30
DRA	30

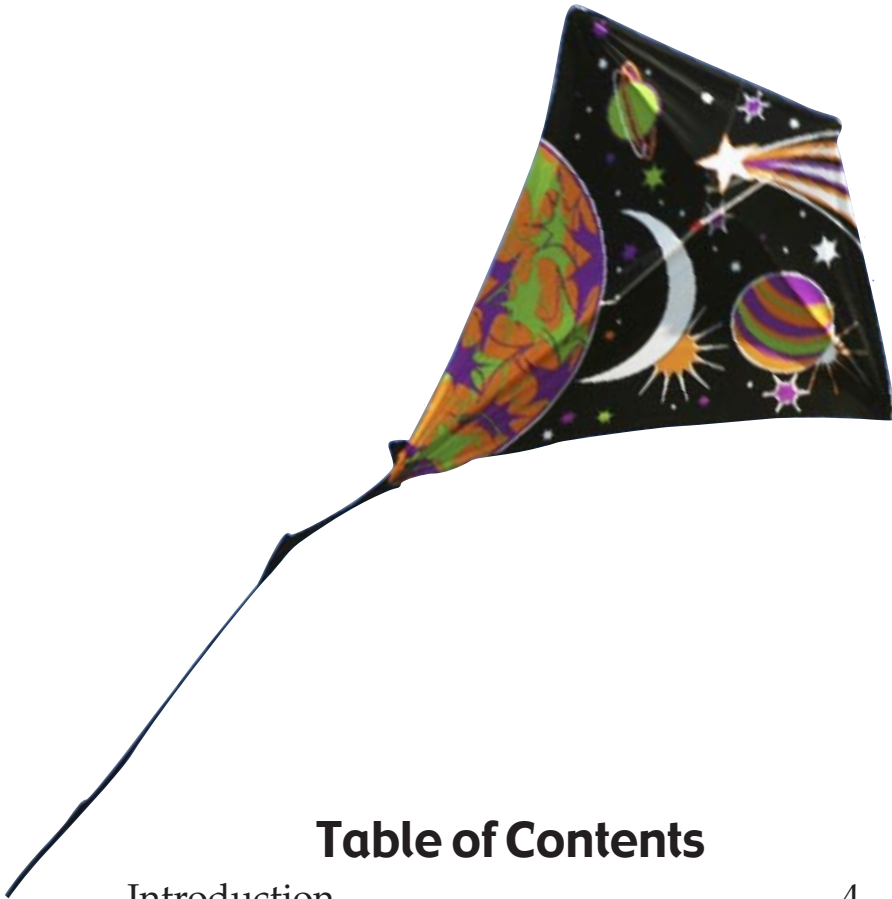


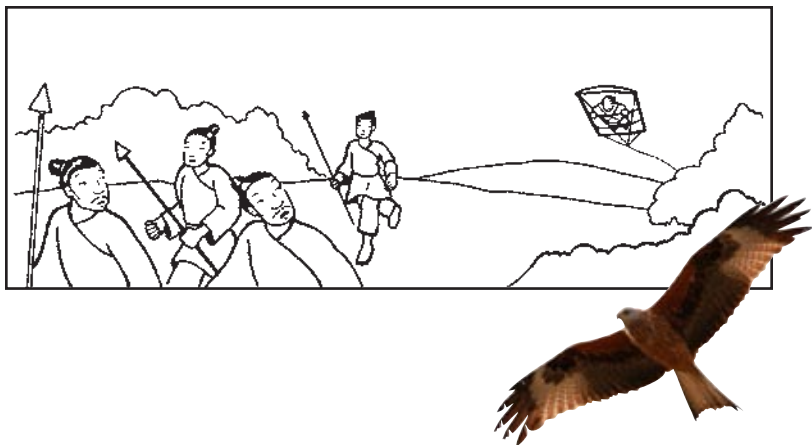
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- Unusual Uses for Kites..... 7
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- Glossary 16



Introduction

Few things are as bright and energetic as a sky filled with colorful, dancing kites! Each design is competing for your attention—long-tailed dragons, spinning metallic stars, and favorite cartoon characters. Kites are no longer just simple toys. Modern, aerodynamic materials and engineering techniques make new kite designs bigger, lighter, and stronger and allow them to perform like aerial acrobats.



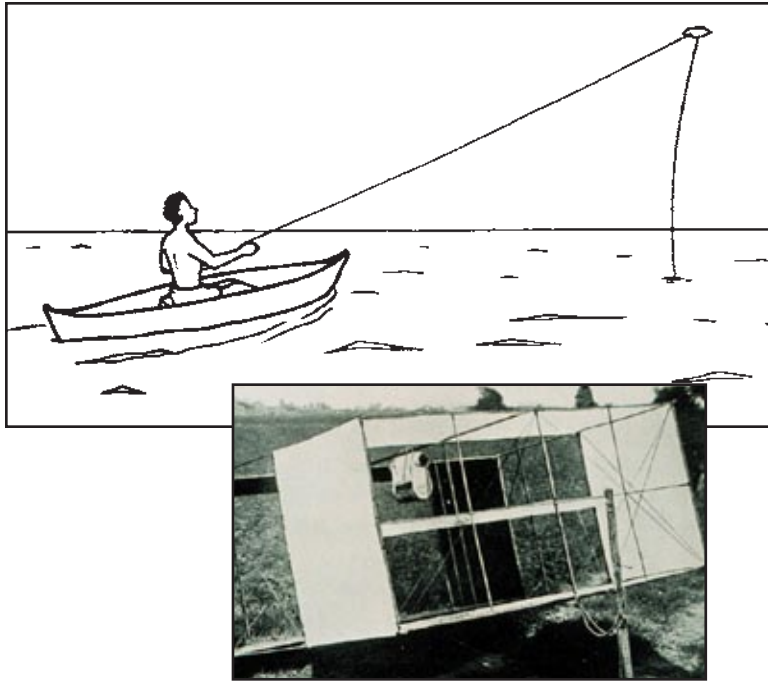
History of Kites

Thousands of years ago, the first toy kites were named after the kite bird, a large, graceful bird with a very wide wingspan. In imitation, many early kites were shaped like birds, but people continually experimented with kite designs. Slowly, kites became increasingly elaborate and took on identifiable characteristics and consistent flight patterns. Kite flying so captured people's imaginations that stories were written about flyers. One famous Chinese **legend** tells a story about a man who used a kite to attack a fort. Unable to penetrate the walls, he tied himself to a huge kite, flew over the fort's high walls, and frightened the soldiers away.

Some kites have made history. The famous American **diplomat** and **inventor** Ben Franklin loved testing ideas. He used a kite to prove his idea that lightning was made of electric current. On a stormy day, he and his son tied a metal key to a kite string and flew their kite high into the storm clouds. Just as he predicted, electricity from the clouds ran down the wet string to the metal key. When he reached toward the key, the electricity jumped from the key and gave him a **shock**!



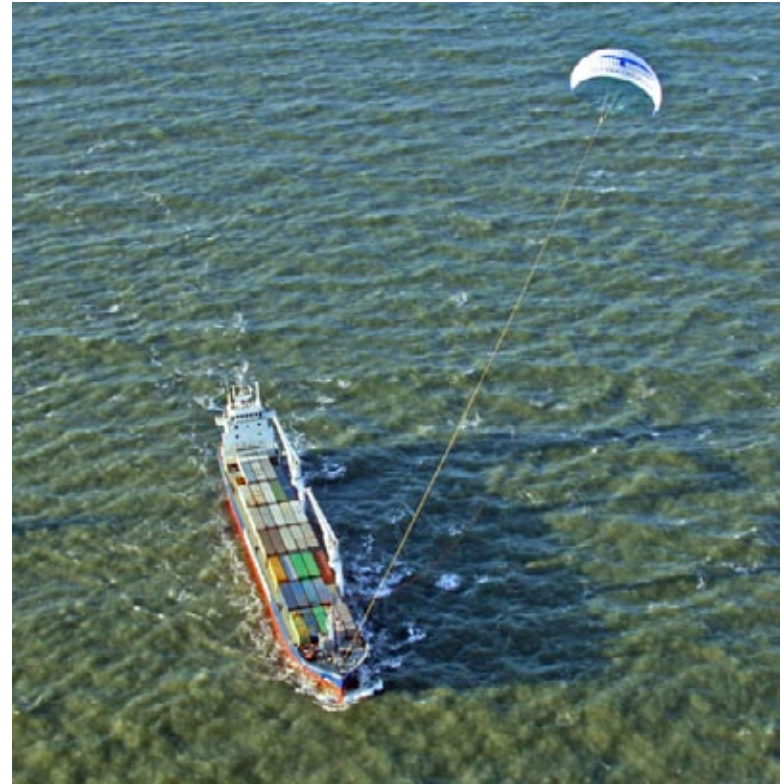
Warning: Don't try this experiment! When Franklin tried it again, he was hurt badly.



Unusual Uses for Kites

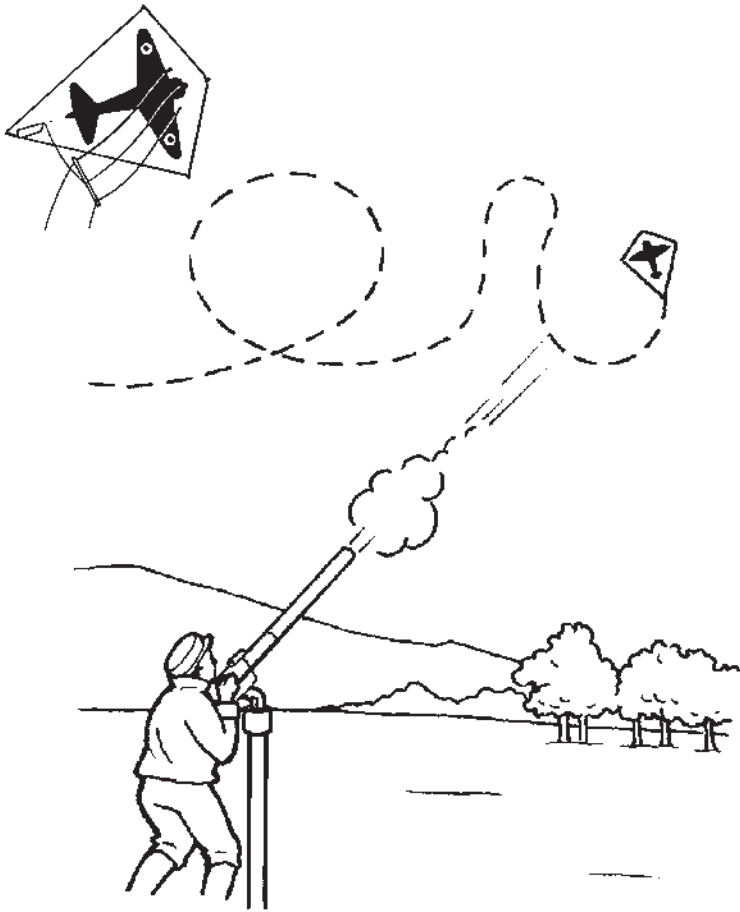
Fishing: Fish like to chase things in the water. To reach fish that swim far from shore, some people attach a shiny, baited **fishhook** to the long tail of a kite. The airborne kite skips the bait through the water so the fish can see it, bite it, and be caught and reeled in.

Weather charts: For years, scientists used a specially built box kite to carry delicate weather **instruments** aloft—to chart and record wind speeds and air **temperatures**.

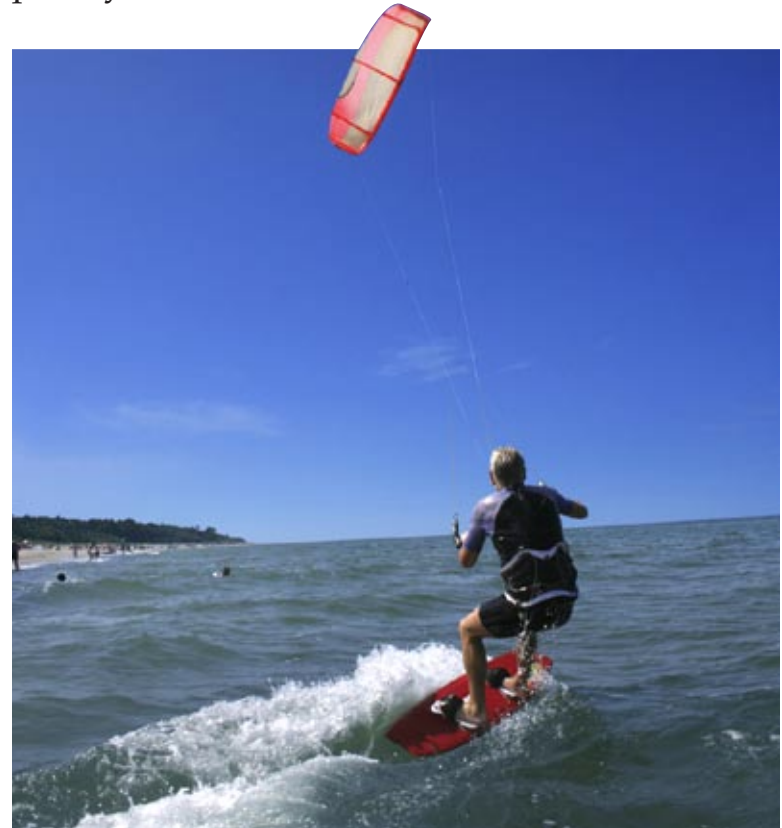


Real wind power: Long-distance cargo ships burn large amounts of fuel and contribute to air pollution. One German shipping company is experimenting with special kites to help reduce both problems. The big kite helps to pull the ship so the ship's engines will burn less fuel every day. As they burn less fuel, the amount of air pollution the engines produce will also be reduced.

Not all spies are well-trained human snoops. For years, armies attached small, powerful cameras to kites to fly over and spy on enemy locations. Armies have also used kites for shooting practice. These special kites could twist and dive, dodging bullets and imitating the evasive moves of military fighter planes.



Watching a kite sail lightly through the sky still makes everyone smile—just as watching the kite bird did long ago. With a little practice, almost anyone can assemble a kite and learn to fly it. One day, you may want to test your new kite-handling skills with multiple-stringed stunt kites. Or you may want to participate in an extreme kite sport, such as *kitesurfing*—where a big power kite pulls your surfboard!

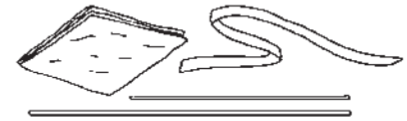




Make Your Own Kite

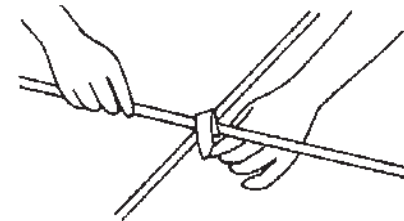
You'll need:

- two lightweight, smooth sticks, one 3 feet (90 cm.) long, the other 2 feet (60 cm.)
- a large plastic trash bag, cut open
- a long strip of lightweight cloth or plastic for the tail
- scissors
- strong tape
- a very long string



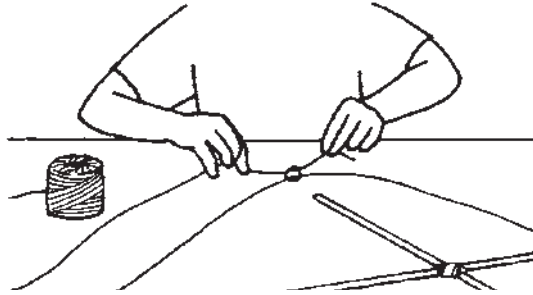
Step 1:

Form a cross shape with the sticks. Wrap tape around the sticks where they meet.



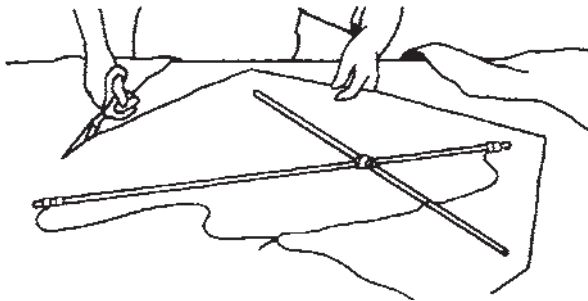
Step 2:

Cut off a 4-foot (120 cm.) piece of string. Tape each end of the string to each end of the long stick. This string is called the **bridle**. Tie one end of the rest of string to the middle of the bridle.



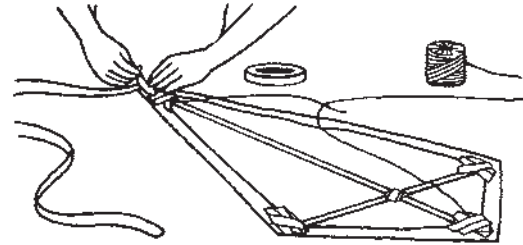
Step 3:

Lay the cross on the open plastic bag. Cut a diamond shape around it. Make sure to cut the diamond shape wider than the ends of the sticks.



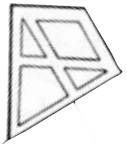
Step 4:

Fold the corners of the diamond over the ends of the sticks. Tape the corners tightly to the sticks.



Step 5:

For a tail, tape the strip of cloth or plastic to the bottom of the kite.



Kite Safety

- Remember to choose an open, safe place to fly your kite.
- Don't fly your kite near power lines. Keep away from trees, roads, and airports.
- Don't fly a kite in the rain or when you hear thunder.
- Be sure nothing is on the ground to trip over.

When it's time to test your first kite, pick a breezy day and take it to a flat, open area, even a beach, if one is nearby. Look around you to be sure that there are no power lines or big trees to tangle your kite. Make sure that there is nothing on the ground that you could trip over.

Ready to start? Hold your kite up by the bridle and run into the wind. When you feel it tug, let go of the kite! Let out a little string, slowly, until you feel the wind pulling your kite. Keep letting out more string until your kite is flying high!



Glossary

bridle (<i>n.</i>)	a kind of harness that guides movement with ropes or strings (p. 12)
diplomat (<i>n.</i>)	a person who represents his or her government to another government (p. 6)
fishhook (<i>n.</i>)	a curved metal hook put on the end of a fishing line (p. 7)
instruments (<i>n.</i>)	tools used for making or recording measurements (p. 7)
inventor (<i>n.</i>)	a person who invents or creates a new device or process (p. 6)
legend (<i>n.</i>)	an old story that is well known but cannot be proved (p. 5)
shock (<i>n.</i>)	a sharp jolt when electric current touches your body (p. 6)
temperature (<i>n.</i>)	the level of how hot or cold something is as measured on a thermometer (p. 7)

Name _____

INSTRUCTIONS: In the first column, write what you already know about the topic. In the second column, write what you would like to know. After you finish reading, fill in the third column with what you learned.

<i>What I learned</i>	
<i>What I want to know</i>	
<i>What I know</i>	

Name _____

INSTRUCTIONS: Read each sentence. Underline the verb. If it is a past-tense verb, put a check mark on the line.

Past tense

Present tense

1. I planted flowers with my mom yesterday.

2. My teacher rides her bike to school.

3. I go to the park every Saturday.

4. The artist showed us his drawing.

5. You finished this worksheet!

Name _____

INSTRUCTIONS: Write the words from the word bank in alphabetical order.

Word Bank

fly
triangle

tree
flat

fun
string

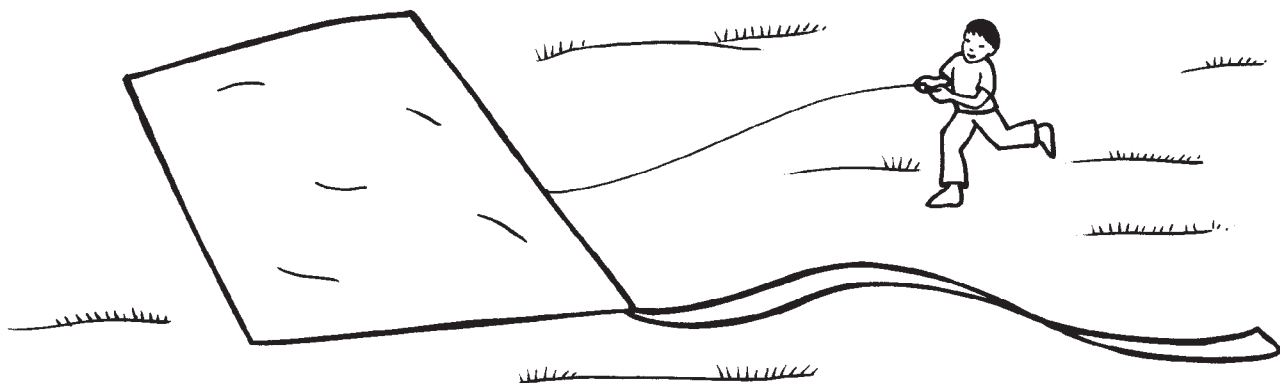
float
ground

1. _____ 5. _____

2. _____ 6. _____

3. _____ 7. _____

4. _____ 8. _____



All About Chocolate

A Reading A-Z Level R Leveled Reader

Word Count: 1,194



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Introduction

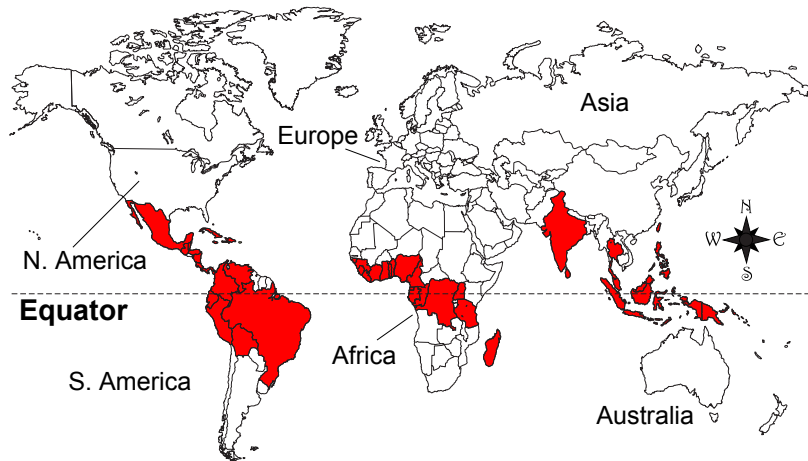
Ask people about their favorite sweet thing to eat, and they'll probably say it's chocolate. People around the world love chocolate. They love it so much that every year they eat more chocolate than any other sweet.

Where Chocolate Comes From

It might surprise you to learn that chocolate actually grows on trees. That doesn't mean that you can pick a chunk of chocolate from a tree branch and eat it. In fact, the chocolate growing on trees looks, tastes, and smells nothing like the chocolate you eat.

The tree that gives us chocolate is the **cacao** (kah-KOW) tree. Chocolate comes from beans that are found in large pods on the tree. Cacao trees grow near the equator, where it is hot and wet.

Where Chocolate Grows



The shaded areas of the map show where cacao trees grow close to the equator, where it is hot.



Cacao trees grow in the wild, as well as on plantations.

Today, most cacao trees are grown on farms called **plantations**. The trees have lots of small white or yellow flowers that bloom during the year. Some of the flowers change into pods, but most do not.

The pods are shaped like little footballs. The pods are green when they first form, but they change to a golden or reddish color as they get ripe.



These pods contain the beans that will be used to make chocolate.



A harvester cracks open cacao pods to get at the seeds.

Preparing the Beans

Taking the pods from the cacao trees is the first step in making chocolate. But it's not the pods that are important—it's the 20 to 50 beans found inside the pods, which are actually the tree's seeds. It takes a lot of beans and a lot of work to make chocolate. First, the pods are gathered. Then, someone using a large blade called a **machete** (mah-SHET-ee) cuts the pods open.

The beans are then scooped out of the open pod. The beans are not brown, as you might expect. Instead, they are cream colored and covered with a soft pulp. These beans are a long way from being the chocolate you know.



This is what the inside of a cacao tree pod looks like.



A worker spreads the cacao beans so they can dry and then begin the fermentation process.

The pulp-covered beans are put into piles or boxes and covered. As the beans come in contact with the air, they begin to change from a cream color to a purple color. The beans also change on the inside in a process called **fermentation**. Fermentation can take more than a week, but the fermented beans still do not taste or smell like chocolate.

After the beans have fermented, they are dried. As they dry, the beans are turned. Once the beans are dry, they are placed in large cloth bags and shipped to makers of chocolate.



Workers spread cacao beans to dry in the sun.

From Beans to Chocolate

Making chocolate from the fermented, dried beans is a very long and complicated process. First, the beans need to be cleaned, which removes any remaining pulp or pieces of the pods. Then, chocolate makers blend different varieties of beans to make sure the chocolate has just the right flavor.

The cleaned and blended beans are roasted in order to bring out the chocolate flavor. This is the stage when the beans begin to smell like chocolate. As the beans are roasted, the thin shell that covers them grows brittle. The beans pass through a special machine that cracks their shells and blows away the pieces of shell with fans.



Beans roast in giant drums at a candy factory.

After the shells are removed, only the meaty part of the bean, called the nib, remains. The nibs are ground up and crushed until they become a liquid. The liquid is poured into molds where it cools into bars of bitter, unsweetened chocolate. The bars are then pressed until the most important part of the chocolate, a yellow liquid called cocoa butter, is removed. The cocoa butter drains through a screen and is collected to make the chocolate we eat.

Word Origins

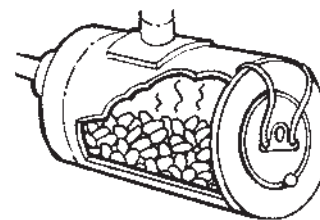
Cacao or Cocoa?

When the products of the cacao tree made their way to English-speaking countries, the Spanish word *cacao* became the English word *cocoa*. Writers and speakers of English today still use the word *cacao* when discussing the tree and its flowers, pods, and beans. People usually use the word *cocoa* when discussing the many products that come from the beans.

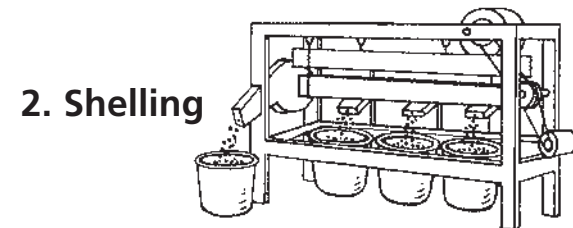


After the liquid cocoa butter is removed, the solid part of the bar is ground into a powder. Cocoa powder is sent to dairies and bakeries to flavor baked goods and dairy products.

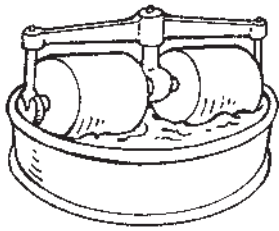
The chocolate we eat is made in the final step, called **conching** (KONCH-ing). Conching takes place in machines with big rollers. Sugar, cocoa powder, cocoa butter, and other **ingredients** are rolled and mixed until smooth. The smooth mixture is poured into molds and cooled. After it has cooled and solidified, the chocolate is removed from the molds and wrapped in packages for shipping.



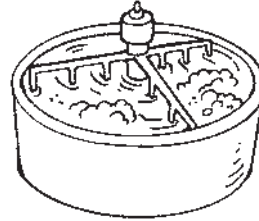
1. Roasting



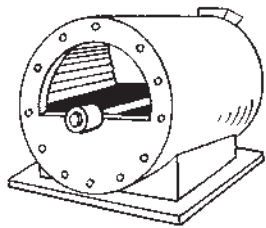
2. Shelling



3. Grinding

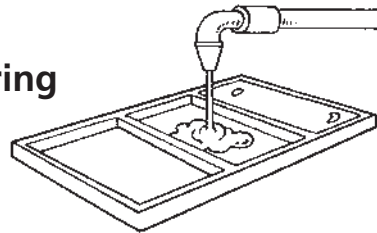


4. Molding



5. Conching

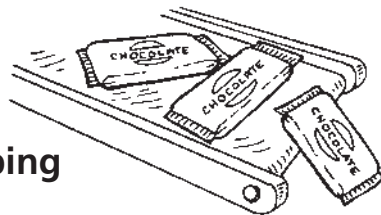
6. Pouring



7. Cooling



8. Wrapping



History of Chocolate

As near as historians can tell, Aztec and Mayan people living in Central and South America were using chocolate almost 2,000 years ago. These people enjoyed a drink made from chocolate. But if you were to try this drink today, you'd find that it tastes much different from the chocolate drinks you enjoy. In fact, it was a very bitter-tasting drink—kind of like coffee.

Christopher Columbus brought some cacao beans back from the New World to show to the king and queen of Spain. But Europeans did not know what to do with the beans, so they mostly ignored them. They were more interested in spices and other things Columbus brought back.

A Spanish explorer by the name of Hernando Cortez helped Europeans begin to see that there was value in cacao beans. The great Aztec ruler Montezuma had served Cortez a drink made from cacao beans. The Aztecs told Cortez that it was the drink of the gods. They believed that cacao beans gave them added wisdom and strength. They placed so much value on cacao beans that they used the beans as a form of money. Cortez saw much more value in the beans as money than as a drink. He planted cacao trees so that he could use the beans, not for chocolate, but as money. It was his way of growing money on trees.



Cortez brought back knowledge of how to make the chocolate drink, but it still was not popular outside the New World. Not until the Spanish began mixing sugar with the drink did chocolate begin spreading in popularity.

Until the 1600s and 1700s, chocolate was a luxury food for royalty and powerful church officials. But during the 1600s, people began grinding large amounts of cacao beans in **mills**, producing much more chocolate and lowering the cost. The invention of smooth milk chocolate also increased the treat's popularity. The first chocolate shop in London, England, was opened in 1657. In the 1700s, a steam-driven chocolate grinder was invented, allowing factories to quickly make tons of affordable chocolate. Today, chocolate is a favorite and affordable treat in many countries.



Chocolate is enjoyed with gusto by people of all ages.

Timeline

- 200 — The first use of chocolate by people in South and Central America
- 900 — Chocolate used as money by people of South and Central America
- 1502 — Columbus brings cacao beans back to Europe
- 1528 — Hernando Cortez brings cocoa beans and knowledge of how to make a chocolate drink to Spain
- 1657 — A Frenchman opens the first chocolate shop in London, England
- 1828 — Cocoa press is invented
- 1847 — First solid chocolate bar is sold
- 1875 — A man in Switzerland makes and sells the first milk chocolate
- 1894 — Milton Hershey establishes Hershey Chocolate Company
- 1913 — Invention of a method for making chocolates filled with other sweets
- 2007 — World consumes over 3,000,000 metric tons of cacao beans



Some specialty shops sell only chocolate treats.

Do You Know?

Recent medical studies show that there are definite medical benefits in eating chocolate. The benefits are linked to dark chocolate, rather than milk chocolate. Some of the medical benefits include a reduction in heart disease and blood pressure.

Chocolate Today

Most of the chocolate made in factories today is used to make chocolate candy. Other chocolate goes into ice cream, chocolate drinks, and baked goods such as cakes and doughnuts. Even a sauce called **mole** (MOLE-ay), used in Mexican cooking, is made from chocolate.

Each year people around the world **consume**, or eat, tons of chocolate. The people of Switzerland consume more chocolate per person than anyone else in the world. They are joined in their love of chocolate by people in many other European countries. The table below shows chocolate consumption in the top ten chocolate-consuming countries.

Top Chocolate-Consuming Countries on a Per-Person, Per-Year Basis



1	Switzerland.....	22.4 lbs.....	10.1 kg
2	Austria.....	20.1 lbs.....	9.1 kg
3	Ireland.....	19.5 lbs.....	8.8 kg
4	Germany.....	18.0 lbs.....	8.2 kg
5	Norway.....	17.9 lbs.....	8.1 kg
6	Denmark.....	17.7 lbs.....	8.0 kg
7	United Kingdom.....	17.5 lbs.....	7.9 kg
8	Belgium.....	13.2 lbs.....	6.0 kg
9	Australia.....	13.0 lbs.....	5.9 kg
10	Sweden.....	12.9 lbs.....	5.8 kg

Try This!

Yummy Chocolate Brownies

Make sure you have an adult to help you with any cutting or handling of hot foods.

1 Gather these ingredients:

- 1 cup butter or margarine
- 4 squares (1 oz. each) of unsweetened chocolate (also called baker's chocolate)
- 4 eggs
- 2 cups white sugar
- 2 teaspoons vanilla extract
- 1 1/2 cups all-purpose flour
- 1 teaspoon baking powder
- pinch of salt



2 Preheat the oven to 350°F (180°C). Rub grease over a 9x13-inch (15-cup) baking pan.

3 Melt the butter in a saucepan over medium heat on the stovetop. After the butter is melted, take it off the heat and stir in the chocolate until it is melted and mixed in. Add the eggs one at a time, stirring thoroughly. Then add the sugar and vanilla, stirring the mixture until smooth.

4 In a separate bowl, mix the flour, salt, and baking powder. Gently pour the butter, chocolate, and sugar mix into the flour and stir it until the flour is completely wet.

5 Pour the mixture into the baking pan and spread it evenly.

6 Bake for 25 to 30 minutes until the brownies begin to pull away from the sides of the pan.

7 Let the brownies cool in the pan before you cut them. Makes 12 brownies.



The next time you eat chocolate, think about how it was made.

Conclusion

It took a long time for chocolate to become popular outside the regions of Central and South America where cacao trees come from. Over the years, people added things such as sugar and milk to the long and complicated process of making chocolate from cacao beans. Today, people around the world eat millions of kilograms of chocolate, making it the world's most popular sweet.

Glossary

cacao (<i>n.</i>)	the tree from which we get chocolate (p. 5)
conching (<i>v.</i>)	powerfully mixing air into a liquid (p. 14)
consume (<i>v.</i>)	eat or buy (p. 21)
fermentation (<i>n.</i>)	a natural changing process that occurs in many foods and plants (p. 10)
ingredients (<i>n.</i>)	the different food items that go into a dish or recipe (p. 14)
machete (<i>n.</i>)	a long, thick knife (p. 8)
mills (<i>n.</i>)	machines that use animal, wind, or steam power to grind things (p. 18)
mole (<i>n.</i>)	a spicy Mexican sauce made with chile and strong chocolate (p. 20)
plantations (<i>n.</i>)	large farms with many workers (p. 6)

Index

cocoa, 13, 19	fermentation, 10
Columbus, Christopher, 16, 19	Mayans, 16
Cortez, Hernando, 17, 19	plantations, 6
Hershey, 19	pulp, 9, 12

Name _____

INSTRUCTIONS: Number the steps in making cacao beans into chocolate.

Chocolate makers get the beans in cloth bags.

The bean shells are removed.

Beans are changed in the fermentation process.

Cocoa butter is removed from liquid in molds.

The beans are dried.

Conching takes place.

The chocolate is wrapped in packages for shipping.

Nibs become liquid in the grinding process.

Cleaned beans are blended and roasted.

The pods are cut open, and the beans are scooped out.

Cocoa powder is sent to bakeries and dairies.

The bean pods are removed from the cacao tree.

Name _____

INSTRUCTIONS: Circle the simple subject and simple predicate in each sentence. Underline the complete subject once and the complete predicate twice.

1. The pods look like little footballs.
2. A skilled pod breaker cuts open the pods.
3. A worker scoops out the beans.
4. Fermentation changes the beans.
5. Hot air dries the beans.
6. Chocolate makers get the beans in large cloth bags.
7. They roast the beans to bring out the chocolate flavor.
8. Conching is the final step.
9. Molds hold the melted chocolate.
10. Candy stores sell chocolate bars.

Name _____

INSTRUCTIONS: Before reading, write what you know or think each word means. After reading the book, make a ✓ if your prediction was correct, or write the correct meaning of the word.

Word	Before Reading Predicted Meaning	After Reading Correct	After Reading Revise Meaning
mole			
ingredients			
cacao			
fermentation			
machete			
conching			
plantation			
consume			
mills			

Arrows

A Reading A-Z Level R Leveled Reader

Word Count: 1,480



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ARROWS



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ARROWS



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Page 7: courtesy of the William Hammond Mathers Museum, Indiana University

The photograph on page 7 shows the Choctaw Telephone Squad at Camp Merritt, New Jersey, on June 7, 1919.

From right to left : Captain E.H. Horner (Commanding)

Private James Davenport, Choctaw, age 27

Corporal James Edwards, Choctaw, age 20

Corporal Calvin Wilson, Choctaw, age 24

Private Mitchell Bobbs, Choctaw, age 25

Corporal Taylor Lewis, Choctaw, age 22

Arrows

Level R Leveled Reader

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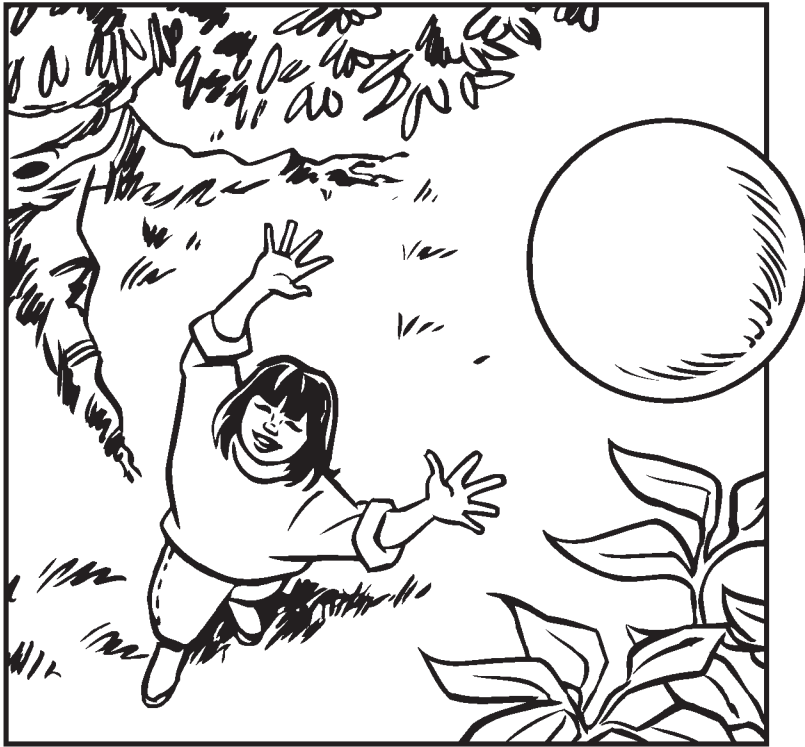


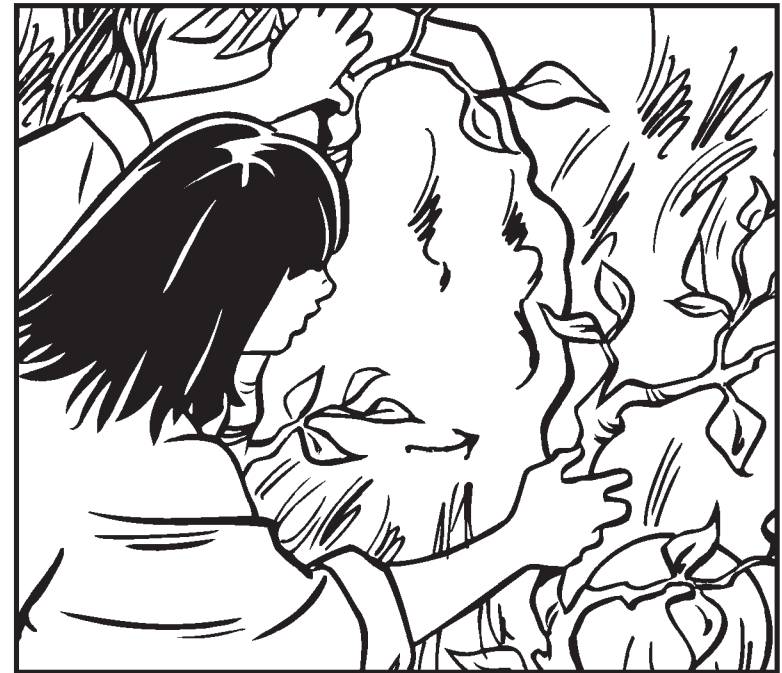
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Cracking the Code	14
The Drinking Gourd	17
Glossary	20

THE FIRST ARROW

Poloma was tossing her new ball high into the air when she discovered the first arrow in the forest. When her ball came down, it bounced off a tree trunk, hit a log, and came to rest at the base of a boulder.

She was digging the ball out from the heavy **undergrowth** when she noticed the arrow. It was carved into the lower part of the massive rock.





Poloma grabbed her ball and raced home. Her grandfather was resting on the porch swing. His eyes were closed, and for a moment she wondered if she should wake him with the news.

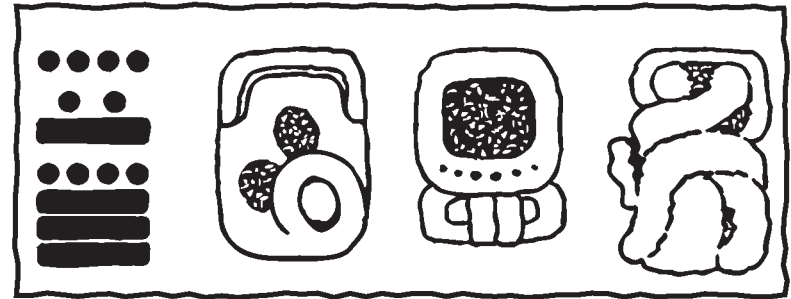
“You’ve discovered something,” he said softly, when she was settled beside him. “I can tell by the way you’re fidgeting.”

“I’ve found an arrow, Papa!” Poloma said.

“And where is this arrow that excites you so much?” her grandfather asked.

Poloma told her grandfather about the bouncing ball, the boulder, and the strange arrow carved into the rock.

“Do you think the arrow is a **glyph** like the ones in my **code** books?” Poloma asked. “Maybe it’s a Mayan hieroglyphic. The Mayans used tiny pictures instead of words and letters. Maybe they carved that arrow,” Poloma guessed.



Papa pulled himself out of the swing and smiled down at his granddaughter. “That’s an interesting idea,” he said. “But I doubt the Mayans were carving rocks around here. The Mayans lived farther south, in Mexico and Central America. However, your arrow might be part of a code of some kind.

“Come on,” her grandfather said, “I think we should visit this mysterious arrow.”

Poloma's grandfather knew a lot about codes. In fact, he had won a medal for his code work during World War II. Papa and other Native American **Code Talkers** had helped the United States and its allies win the war by sending secret messages.

Poloma loved to hear the story of the Code Talkers, even though she had heard it many times before. She especially liked to hear about Mississippi **Choctaw** Code Talkers like her grandfather.

As they made their way toward the boulder, Papa told Poloma how the Code Talkers sent messages that only other Code Talkers could **interpret**.



This group of Oklahoma Choctaw soldiers from World War I paved the way for other native languages to be used as codes in World War II.



QUESTIONS

"We spoke into walkie-talkie radios," he explained. "There was a Code Talker on each end, and we would only use Choctaw words that no one else could understand. Someone would give me the message that I was to pass on, and I would speak the words in Choctaw. If the enemy was listening in on the radio, they wouldn't be able to understand what we were saying."



When Poloma and her grandfather arrived at the boulder, they knelt and Poloma pointed to the roughly carved arrow. “What do you think it means?” she asked.

Papa ran his fingers back and forth over the carving. “I’m not sure,” he said. “It’s a very old carving, but it’s hard to determine its age. It takes a lot of time and effort to figure out how old something like this is.”

Poloma stared at the arrow for a long time. Suddenly, she had an idea.

“I know!” she shouted. “Why don’t we follow where the arrow is pointing?”

The arrow pointed to another boulder nearby. Poloma and Papa examined the boulder the arrow was pointing toward and found a second arrow almost immediately. The second arrow pointed in the same direction as the first, so they followed that one, too. It led to another boulder, and another arrow, which led to yet another, and then another arrow.

There were six arrows in all.



They continued on, and the arrows led them straight toward a stream.

“What should we do?” Poloma asked.

“Let’s cross the stream. It looks shallow. If we tiptoe from stone to stone, maybe we’ll find another arrow on the other side. Hold my hand tight; we’ll cross together.”



ANSWERS

They crossed the stream, holding hands, stepping carefully. When they reached the other side, they almost crashed into the next boulder. It was hidden in a grove of old pine trees.

“I found something!” Poloma shouted, as she leaned closer to the boulder and scraped off some moss with her fingers. “It’s not an arrow at all. A bunch of letters are carved into the bottom of the boulder! I wonder if we can make them out.”

“I’m afraid you’ll have to read them to me,” Papa stood up slowly and rubbed his knees. “My eyes are too old to make out those tiny letters. I’m afraid my knees aren’t too good either.”

Poloma leaned closer to the boulder and studied the letters. “They don’t make any sense,” she said. “I’ll read them to you, but I don’t think they mean anything.”

Poloma read each letter out loud, very slowly.

g p m m p x u i f e s j o l j o h h p v s e

“What do you think the letters mean?” Poloma asked.

“I’m not certain,” Papa said, “but I think it’s a cipher.”



Poloma knew what a cipher was. It was a code that substituted letters or numbers for the real letters in a message. She knew ciphers were used in wars to keep the enemy from learning about battle plans. Now they had to crack the code.

"Did you use a cipher in the war?" Poloma asked.

"I saw them used in World War II. Ciphers that substitute letters for other letters have been used since the time of Julius Caesar, more than two thousand years ago," said Papa.

CRACKING THE CODE

"I wonder if these letters were used in a war," Poloma said.

Papa had to think about that. He paced for a very long time, and then he stopped beside his granddaughter and cleared his throat.

"I think I remember something," he said. "As you know, a great war took place right around here."

"The Civil War—right, Papa?" Poloma said.

"Yes. About 150 years ago, the Civil War was fought to free the slaves in the South. I can recall reading that the soldiers and spies in the North used a special code."



"Do you remember what the code was, Papa?"

"Read the letters again and maybe that will help me."

Poloma read the letters slowly.

g p m m p x u i f e s j o l j o h h p v s e

She was about to ask her grandfather what the letters meant when she noticed something in the cipher that she had seen in codes she had **deciphered** before. Most sentences contained at least one small common word, and this one was no different.



"I think I see some interesting letters," she said. "Let's say the letters form words. One of the words has three letters. Let's guess that it's a common word."

". . . like *and*?" suggested Papa.

Poloma and Papa were quiet for several minutes as they thought about the three letters. "I don't think it's *and*," Papa said. "The letters don't make sense."

"Maybe the letters *uif* stand for *the* in some way," Poloma said.

Papa smiled. "What letter comes before *u* in the alphabet?" he said.

"*T*," Poloma said. "And the letter *h* comes before *i*, and the letter *e* comes before *f*. This is a substitute-letter cipher, Papa!"

"Yes! I remember now! During the Civil War, some Northern spies used a code called the advance cipher. They advanced each letter one letter of the alphabet."

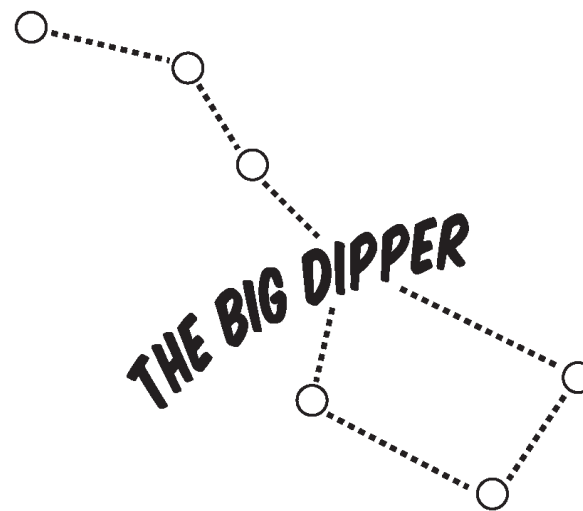


THE DRINKING GOURD

Once they cracked the code, it was not difficult to read the message.

"I know what it says, Papa! It says, 'Follow the Drinking Gourd.' But I don't know what the message means. Do you know what it means?"

"The Drinking Gourd is the group of seven stars now called the Big Dipper, which can always be found in the northern sky. Escaping slaves followed the Drinking Gourd from safe house to safe house until they reached their freedom."



The sun began to set, and tiny slivers of light flickered through the branches. Meanwhile, Poloma took her flashlight from her backpack, turned it on, and grabbed her grandfather's hand. By the time they returned to the other side of the stream, the sun had completely disappeared. Poloma stopped and studied the sky.

"Are you looking for the Drinking Gourd?" her grandfather asked.

"There it is!" Poloma pointed to a bright shape in the sky. "Shall we follow it?"

"It's your decision. Are we heading north?"

Poloma had to think about that for a minute. The Drinking Gourd would lead them back across the stream, past the boulder with the cipher, on to places north.

“We need to go south, Papa. That’s where we live.”

Poloma and Papa turned. They moved slowly, like creeping night creatures. The glowing beam from Poloma’s flashlight led them away from the North Star, past the arrows pointing the other way, out of the woods, and home.



GLOSSARY

Choctaw (*n.*)

a member of a group of Native Americans in the Southeast (p. 7)

code (*n.*)

a system of letters, symbols, or signals that have special meaning and are used to send messages (p. 6)

Code Talkers (*n.*)

Native Americans who used their native language as a code during World Wars I and II (p. 7)

deciphered (*v.*)

worked out the meaning of a secret message or writing (p. 15)

glyph (*n.*)

a picture or other character with special meaning that is often carved into something (p. 6)

interpret (*v.*)

to tell or explain the meaning of something (p. 7)

undergrowth (*n.*)

shrubs and small trees growing under large trees (p. 4)

Name _____

INSTRUCTIONS: As you read Chapter 2 in *Arrows*, identify the important information by answering the questions in the chart. Record the information in the spaces below. Then use the information you've collected to write a short summary.

Who?	
What?	
When?	
Where?	
Why?	

ARROWS • LEVEL R • 1

← Summary →

SKILL: SUMMARIZE

Name _____

INSTRUCTIONS: Read the pronouns in the word box. Then read each sentence. Replace the underlined word or words in each sentence with a pronoun from the word box. Write the new sentence on the line.

him	her	they	it
she	he	it	we

ARROWS • LEVEL R • 2

1. Grandfather won a medal for his code work during the war.

2. The carving was very old.

3. Grandfather looked at Poloma and smiled.

4. Do you think there's anything carved on the rock?

5. Poloma and her grandfather were both interested in ciphers.

6. She asked her grandfather about the Civil War.

7. Grandpa and I solved the cipher together.

8. Poloma was proud of her discovery.

SKILL: PRONOUNS

Name _____

INSTRUCTIONS: Read each sentence below. Using a thesaurus, find two synonyms for the underlined word in each sentence. Write the synonyms in the box next to each sentence. Then choose one synonym to rewrite the sentence on the line provided.

1.

Poloma found an arrow carved in a big rock.

2.

Grandfather paced when he had an important matter to think about.

3.

Poloma asked good questions to learn more about codes.

4.

Grandfather told interesting stories about Code Talkers.

5.

Poloma and Grandfather were excited when they deciphered the code.

ARROWS • LEVEL R • 3

SKILL: SYNONYMS

Alaska: The Last Frontier

A Reading A-Z Level R Leveled Reader

Word Count: 961

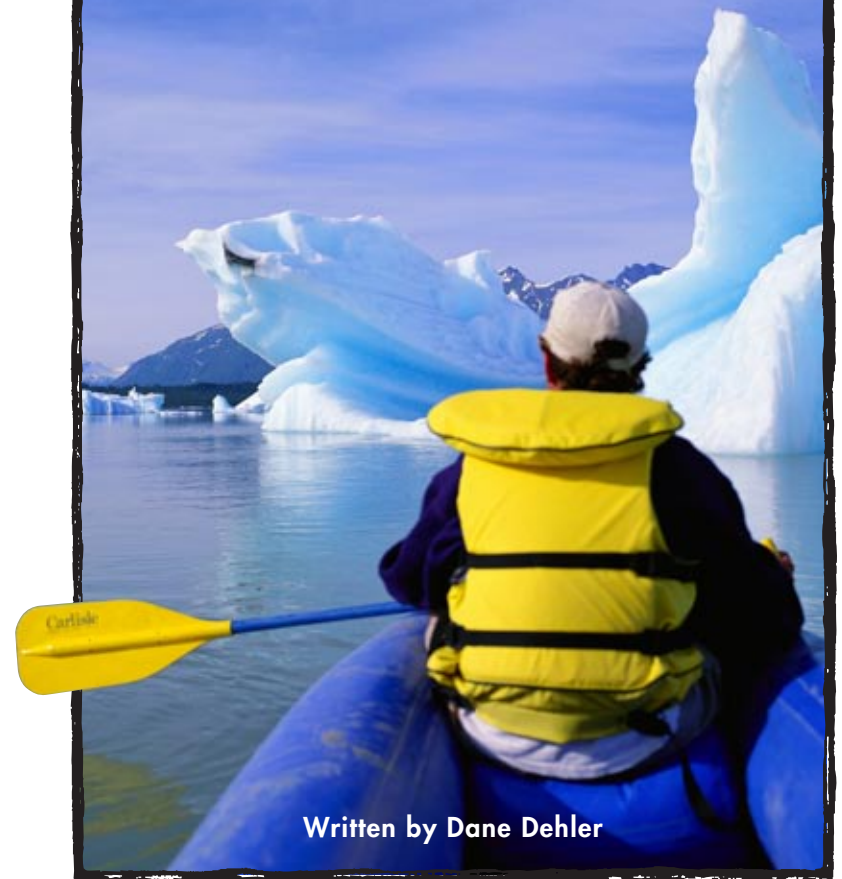


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Alaska: *The Last Frontier*



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Alaska:

The Last Frontier



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Alaska is famous for its dramatic landscape and harsh climate.

Welcome To Alaska

At the very top of North America lies a cold, wild land: Alaska. Alaska is west of Canada. It sits on the **Arctic Circle**, between the Pacific and the Arctic Oceans. The climate there is stormy and cold. But Alaska has beautiful scenery, amazing wildlife, and great natural resources. Because it has such huge, empty spaces, some people call Alaska "The Last Frontier." Alaska has an exciting history and a bright future. This book will tell you all about America's last frontier.

Alaska's Land

Alaska is enormous, covering over 1.7 million square kilometers (about 660,000 sq. mi.). The coastline of Alaska is longer than the coastline of the rest of the United States put together. Alaska is almost as large as the entire country of Mexico!



Alaska is more than twice the size of the next-largest state, Texas.

Because it is so big, Alaska includes many different landscapes. Southeast Alaska lies along the Pacific Ocean next to Canada. It has weather similar to Vancouver, British Columbia, or Seattle, Washington, with a great deal of rain and **relatively** warm winters.



Southcentral Alaska also lies along the Pacific coast. It includes Alaska's largest city, Anchorage.

Do You Know?

Alaska is home to Mount McKinley, the tallest mountain in North America. Mount McKinley towers 6,194 meters (20,320 ft.) above sea level. That's as tall as over 1,000 houses stacked on top of each other!

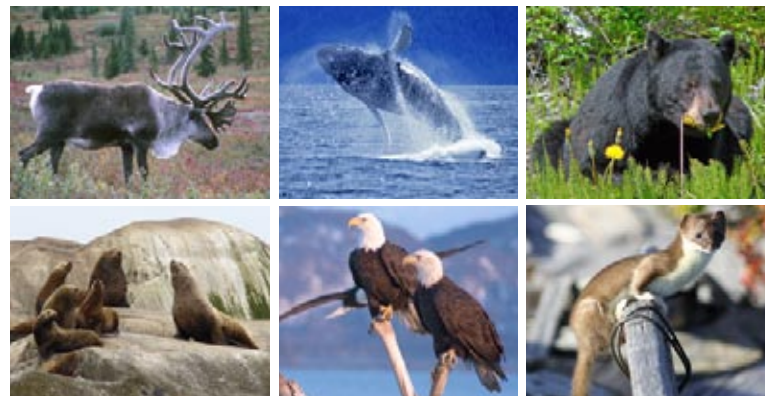


The Arctic tundra is a huge, flat grassland that it is too cold for trees to grow.

Most of the land in Alaska is in what many Alaskans call “the Interior.” The Interior is full of mountains, glaciers, and Arctic **tundra**. The climate is freezing cold, and it can also be quite dry. Very few people live in this part of the state.

Do You Know?

The most northern part of Alaska is known as the “land of the midnight sun.” Above the Arctic Circle, the Sun does not fully set for 24 hours during the summer solstice. But during the winter solstice, the Sun does not fully rise for 24 hours. The amount of sunlight varies as Earth’s tilt and spin causes the Arctic Circle to turn toward and away from the Sun. Summer temperatures can be above 32 degrees C (90° F), while winter temperatures can drop below –50 degrees C (–60° F).



Alaska is famous for its snowy mountains, giant forests, crystal-clear lakes, and beautiful coastline. This wild land is home to grizzly bears, moose, polar bears, wolves, bald eagles, and caribou. Whales, seals, sea lions, sea otters, and fish live in its waters. Many animals in Alaska have thick fur or blubber to keep warm.



Some animals, such as the willow ptarmigan (TAR-mi-gan), Alaska’s state bird, change color from summer to winter. In summer, they are speckled brown to blend in with the ground, but in winter, they turn white to blend in with the snow. This color change helps them hide from animals that want to eat them.

Alaska’s state bird: the willow ptarmigan

Alaska's History

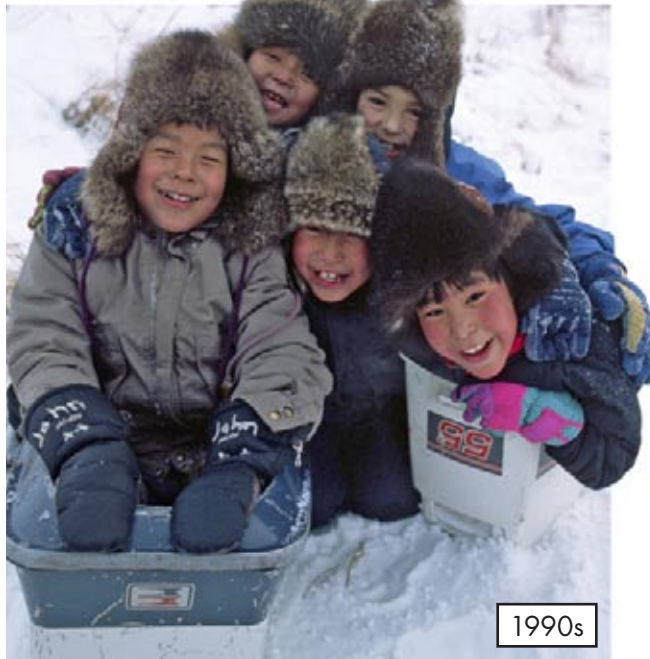
Native Americans first came to Alaska over ten thousand years ago. Many Native



Americans fished and hunted sea mammals such as seals. They used **kayaks** to travel along the coast

and dog sleds to move on land. They made warm clothes from caribou fur and waterproof boots from sealskin.

Long ago, one Native American nation, the Inuit, lived off Alaska's land and sea. Many Native Americans still live in Alaska today, although most live a modern lifestyle.



Alaska is actually closer to Russia than it is to the rest of the United States. Russian culture can be seen in churches like this one in Sitka, Alaska.

Because Alaska is so far north and so cold, Europeans did not come there until 1741. Russian fur traders were among the first Europeans to come to Alaska. Alaska even belonged to Russia for a while. By the 1800s, American fur traders were also coming into Alaska from the south. In 1867, the United States bought Alaska from Russia.

Bill of sale
between
Russia and the
United States



Thousands of people rushed to the Yukon for gold.

Many Americans thought Alaska was worthless until a sudden discovery in 1896. Gold was found in Canada's nearby Yukon Territory. Miners from all over the world came through Alaska, hoping to get rich.

Alaska finally became a U. S. state on January 3, 1959. Children were invited to create its state flag. Seventh grader John Benson created the winning design.



Alaska state flag; John Benson chose the flag's blue background for the sky and the Great Bear constellation for strength.

On March 27, 1964, a giant earthquake shook Alaska, destroying parts of Anchorage. The "Good Friday Earthquake" killed 131 people. It is still one of the most powerful earthquakes ever measured.

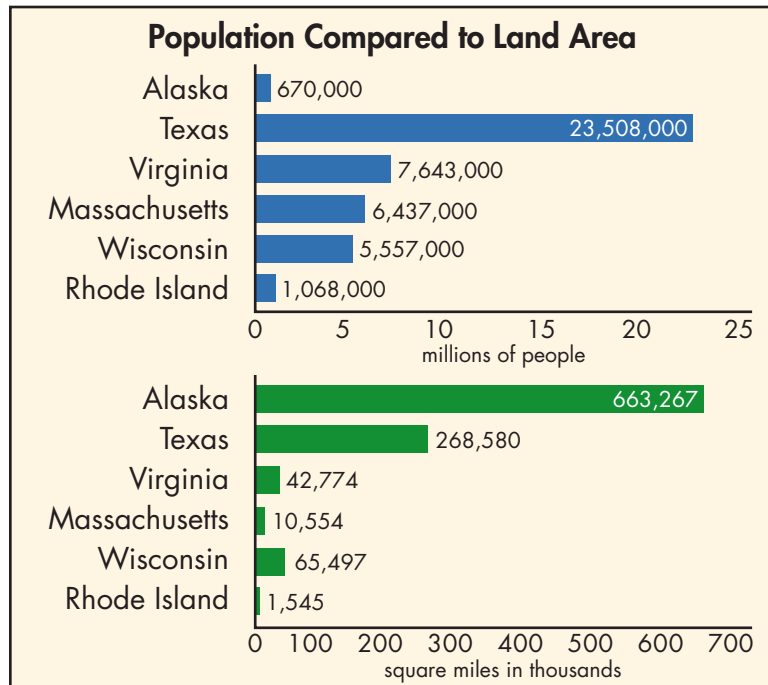


The Good Friday Earthquake destroyed many parts of Anchorage. It also caused a tsunami that reached Hawaii.

In 1968, oil was discovered on Alaska's northern coast. Oil has completely changed Alaska's **economy**. It is the biggest business in Alaska today.

Alaska Today

Although Alaska has the largest area of any U.S. state, it has almost the smallest population. In 2007, the population of Alaska was about 670,000 people, which is only about the population of Memphis, Tennessee. Most of Alaska's people live in the cities. Anchorage, the largest city, has the state's largest port. Alaska's capital is Juneau (JOO-noh). But there are no roads going to this city. You can get there only by sea or by air!



The economy of Alaska is based on natural resources. Oil is the biggest business in Alaska. The Trans-Alaska Pipeline is a giant oil pipe that stretches across the entire state from north to south. It carries oil from wells on the northern coast to a port on the Pacific coast. From there, ships carry the oil to the rest of the United States.



The Trans-Alaska Pipeline runs 1,300 km (800 mi.) and can carry 2 million barrels of oil per day.

Do You Know?

The state of Alaska makes so much money on oil that it doesn't have to charge income tax or sales tax. In fact, the citizens of Alaska actually get money from their government. Some Alaskans receive almost \$2,000 per year!

Fishing is also very important in Alaska. Alaskan boats catch cod, salmon, crab, and other **delicacies**.

Today, Alaskans are proud of being tough and different. Many Alaskans enjoy outdoor sports such as hunting, fishing, and riding snowmobiles. Alaskans have a great spirit of **individualism** in their politics and in their daily lives.

Fishing in Alaska is one of the world's most dangerous jobs. The seas around Alaska are rough, stormy, and freezing cold.



Many Alaskans take pride in living on the "last frontier" away from big cities. Some areas require boats or planes to get to them.



The northern lights are usually visible only in the far north.

Alaska's Beauty

The beauty of Alaska touches every part of life. During the darkest days of winter, the sky above Alaska sometimes fills with light. The **aurora borealis**, or northern lights, shine when tiny particles from the Sun get pulled toward Earth by the planet's magnetic field.

One of the fastest-growing parts of the Alaskan economy is tourism. People from all over the world come to see Alaska's beautiful landscapes and amazing wildlife.

Each year, thousands of tourists come to Alaska. They go on cruise ships to see icebergs and whales. They ride snowmobiles to see snow-covered mountains. They hike through national parks hoping to see grizzly bears or moose. The beauty of Alaska is one of the state's greatest natural resources.

But not everyone agrees about how to **preserve** this beauty. Alaskans make most of their living from oil. Some people say that drilling and shipping oil hurt the state's wildlife and natural beauty. Many people want to set aside huge areas of Alaska that cannot be drilled for oil or changed by humans in any way. But other people say this is a waste of resources.

In Alaska, industry often sits side by side with wilderness.



Polar bears hunt seals from sea ice. As the sea ice melts, the bears have a more difficult time finding food. Climate scientists study ice cores to find answers about global warming.

Climate change may also hurt Alaska's beauty. If the climate warms up, Alaska's glaciers will likely melt, and polar bears will have a more difficult time finding food. However, people in this cold land often enjoy warmer winters. And the ice-filled Arctic Ocean may soon be open for shipping and fishing.

Alaska's future will definitely be like its history—full of adventure and excitement. The state's huge size, small population, amazing beauty, and cold climate will continue to keep it America's "Last Frontier."

Glossary

Arctic Circle (<i>n.</i>)	an imaginary line circling the Earth near the North Pole (p. 4)
aurora borealis (<i>n.</i>)	the northern lights, caused by charged particles being pulled into Earth's atmosphere by Earth's magnetic field (p. 16)
delicacies (<i>n.</i>)	foods that are considered very rare and tasty (p. 15)
economy (<i>n.</i>)	the businesses and money of a place (p. 12)
individualism (<i>n.</i>)	the idea that each person is different and that everyone should be allowed to live life as he or she pleases (p. 15)
kayaks (<i>n.</i>)	canoelike boats that are easy to paddle and can hold a lot of cargo (p. 9)
preserve (<i>v.</i>)	to take care of and save for the future (p. 17)
relatively (<i>adv.</i>)	when compared to other nearby or similar things (p. 5)

tundra (*n.*)

a habitat of open, flat grasslands where it is too cold for trees to grow (p. 7)

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Name _____

Instructions: As you read, identify the main idea and supporting details for one of the chapters in the book *Alaska: The Last Frontier*. Record the information on the lines provided below. Then use the information you've collected to write a short summary of the chapter.

Main Idea	Details

ALASKA: THE LAST FRONTIER • LEVEL R • 1

Summary

SKILL: MAIN IDEA AND DETAILS/SUMMARY

Name _____

Instructions: Read the sentences below. Identify the conjunction in each sentence, write it on the line below, and circle whether it is a coordinating or subordinating conjunction.

1. Because it is so big, Alaska includes a lot of different landscapes.

Conjunction: _____
Subordinating
Coordinating

2. Alaska has an exciting history and a bright future.

Conjunction: _____
Subordinating
Coordinating

3. Alaska is surrounded by ocean on three sides and shares a border with Canada.

Conjunction: _____
Subordinating
Coordinating

4. The Arctic tundra is a huge, flat grassland where it is too cold for trees to grow.

Conjunction: _____
Subordinating
Coordinating

5. Many animals in Alaska have thick fur or blubber to keep warm.

Conjunction: _____
Subordinating
Coordinating

6. In summer, they are speckled brown to blend in with the ground, but in winter, they turn white to blend in with the snow.

Conjunction: _____
Subordinating
Coordinating

7. They made warm clothes from caribou fur and waterproof boots from sealskin.

Conjunction: _____
Subordinating
Coordinating

8. Many Native Americans still live in Alaska today, although most live a modern lifestyle.

Conjunction: _____
Subordinating
Coordinating

Name _____

Instructions: Write the words to show how you would read these abbreviations aloud.

Example: Mr. Mister

sq. _____

mi. _____

ft. _____

C _____

F _____

U.S. _____

km _____



Ships and Boats

A Reading A-Z Level R Leveled Reader

Word Count: 1,044




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Ships and Boats



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Front cover: U.S. Coast Guard training ship

Back cover: Motorboat and cruise ship

Title page: Ocean liner

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cruise ships

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Introduction

Before there were cars, trains, or airplanes, boats were the fastest way to travel. Boats and ships helped to shape history, leading explorers to new lands and carrying goods, people, and ideas around the world. Ships and boats have changed a lot over the years but still share many features with the earliest designs. Let's take a look at some of the different kinds of ships and boats.



Boats anchored in a bay.



dugout canoe

Early Ships and Boats

The original boats were carved from single wooden logs. Boats of this kind date back to the Stone Age. People used fire along with tools made of stone, shells, or wood to hollow out the logs. These dugout canoes were used in rivers, lakes, and oceans around the world. People used long poles, paddles, or oars to move the canoes through the water.

Paddles and oars are long pieces of wood with broad, flat ends that push against the water to move the boat forward.



dugout canoe

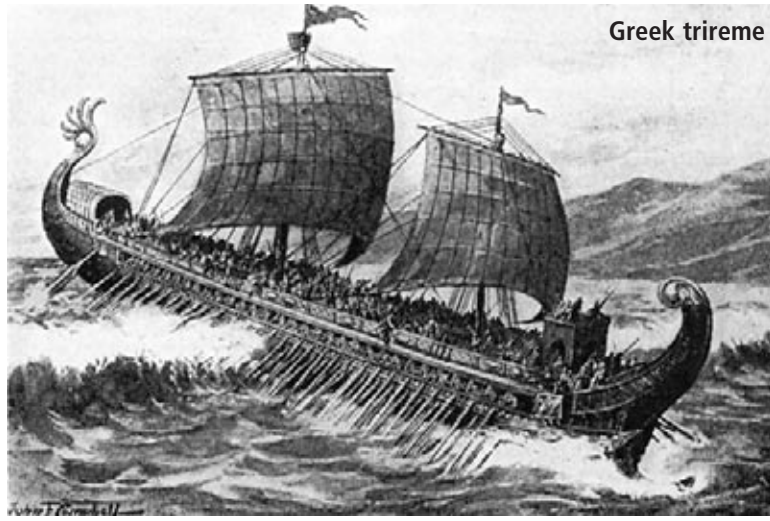


canoe

Later, people began to make boats with wooden frames. They used steam to bend the wood into the shapes they needed to make the frame of the boat. Then they covered the frame with bark or animal skins to keep out the water. People living in the far north made kayaks from driftwood covered with sealskins. They used these boats to hunt and fish over wide areas that they would not have been able to reach without boats.



canoe



Greek trireme

Some frame ships, such as galleys, were much larger than log boats. Thousands of years ago, many ancient civilizations around the Mediterranean Sea used galleys for trade and warfare. The Egyptians, the Greeks, the Persians, and the Romans all used galleys to build and maintain their empires. Galleys were frame ships covered with wood that carried many rowers. The largest galleys had hundreds of rowers sitting on several decks. Many galleys also had sails that could be used when the wind was blowing in the direction the ship was traveling. Some galleys designed for warfare had rams built into their prows that could pierce the sides of enemy ships.



Viking longship

Over a thousand years ago the Vikings of Scandinavia used wooden-framed longships to cross the sea to raid coastal towns and villages in neighboring countries. A typical longship was about 28 meters (90 ft.) long and carried twenty to thirty oarsmen. Like galleys, longships had sails in addition to their oars. Viking longships were sometimes called “dragon ships” because of the dragon heads carved into their prows. The Vikings were skilled sailors and warriors, and their ability to land by surprise anywhere along the coast gave them a big advantage in battle. They also used longships for trade and exploration.



Chinese junk

Sailboats and Sailing Ships

The ancient Egyptians were using sailboats over 5,000 years ago! The earliest sails were made from animal skins or from reed mats. Later, sails were made out of strong linen or other cloth. Wind power captured by sails hanging from masts eventually became the main method used to move boats and ships. Sailboats could travel much farther distances than ships that relied on rowers for their power. Sailboats could even sail against the wind by sailing a zigzag course into the wind.



clipper ship

Around 500 years ago, larger sailing ships began to be built. These sailing ships were able to cross the Atlantic Ocean and were used for trade and exploration. Famous explorers such as Christopher Columbus and Ferdinand Magellan used sailing ships to travel from Europe to North and South America. Magellan was also the captain of the first sailing expedition to sail completely around the world, a journey that ended in 1522 after more than three years.



U.S. Coast Guard training ship

Do You Know?

Sailing ships were also used by pirates around the Caribbean islands three hundred years ago. Many islands in this area were under the rule of faraway countries during this time. Their navies could not protect all the ships traveling back and forth between Europe and the Americas. Pirates looked for small or defenseless ships to plunder, stealing their valuable cargoes. After robbing the crew and passengers of enemy ships, the pirates would often put them ashore on nearby islands and burn or take their ship. The most famous of these pirates, Blackbeard (Edward Teach), was killed in battle in 1718. Modern pirates still use ships to rob people in some parts of the world.



river steamboat



Steamships and Steamboats

When steam engines were invented, they were used in many boat and ship designs. Steamships did not depend on the wind for power; they could sail directly into the wind, or even when there was no wind at all, which no sailing ship could do. Steamboats using paddlewheels became an important way to move goods and people up and down rivers quickly. One of the largest and most famous steamships, the *Titanic*, sank in the North Atlantic Ocean after striking an iceberg in 1912.



S.W.A.T.H. (Small Water-plane-Area Twin Hull) boat

Modern Ships and Boats

Today, many boats are made of metal and plastic. Many ships and boats use diesel or gas-powered engines to turn their propellers. The propellers push the boat through the water. Some modern boats use the ancient catamaran design to travel very fast. A catamaran has two hulls, which keep most of the boat out of the water. This allows a catamaran to travel faster than most ships with only one hull.



Mediterranean fishing boats

Although large, modern boats with gasoline or diesel engines are everywhere, people still use smaller boats for fishing, fun, and sport. It is almost impossible to look at a river, lake, or ocean, and not see a variety of boats. Many smaller boats still use paddles, oars, or sails, just as the earliest boats did.



Some modern ships are very large. Cruise ships are like floating hotels. They can carry thousands of people to exotic destinations all around the world. Huge tankers carry oil and gas over the ocean. Oil tankers are very large ships that are often over 304.8 meters (1,000 ft.) long. The largest oil tanker in the world is over 457.2 meters (1,500 ft.) long—that's longer than the Empire State Building in New York is tall!



Special Ships and Boats

Some boats and ships are designed to do special work. Tugboats push and pull larger ships in places where they can't move themselves. Tugboats also guide very large boats to dock when there is little room to maneuver a big boat. Fireboats help put out fires on other ships. Ferryboats carry cars and people short distances.





Navies use many types of ships and boats, large and small, to defend their coastal areas. Military transport ships carry soldiers around the world. Submarines hide under the surface of the water. Aircraft carriers serve as floating runways and allow planes and helicopters to fly anywhere in the world. Cruisers and destroyers patrol coastal waters.



Conclusion

Ships and boats have played an important part in the advancement of civilization. For thousands of years, they have allowed people to explore their world and travel to places that were once out of reach. They are still an important way to move people and things quickly over the water.

Glossary

catamaran (<i>n.</i>)	a boat with two hulls (p. 13)
course (<i>n.</i>)	a way or path (p. 9)
decks (<i>n.</i>)	the floors on a ship (p. 7)
exotic (<i>adj.</i>)	out of the ordinary, usually from a faraway place (p. 15)
explorers (<i>n.</i>)	people who like to visit and learn about new places (p. 4)
hull (<i>n.</i>)	the main body of a sailing vessel (p. 13)
maneuver (<i>v.</i>)	to move around; to guide the motion of something (p. 16)
masts (<i>n.</i>)	the tall, vertical poles that support the sails of a ship (p. 9)
propellers (<i>n.</i>)	rotating blades connected to an engine that push a boat through the water (p. 13)
prows (<i>n.</i>)	the bows, or front ends of ships (p. 7)
rams (<i>n.</i>)	heavy beaks at the prows of ships designed to pierce enemy ships (p. 7)

Stone Age (*n.*) an early period in human civilization marked by the use of stone tools (p. 5)

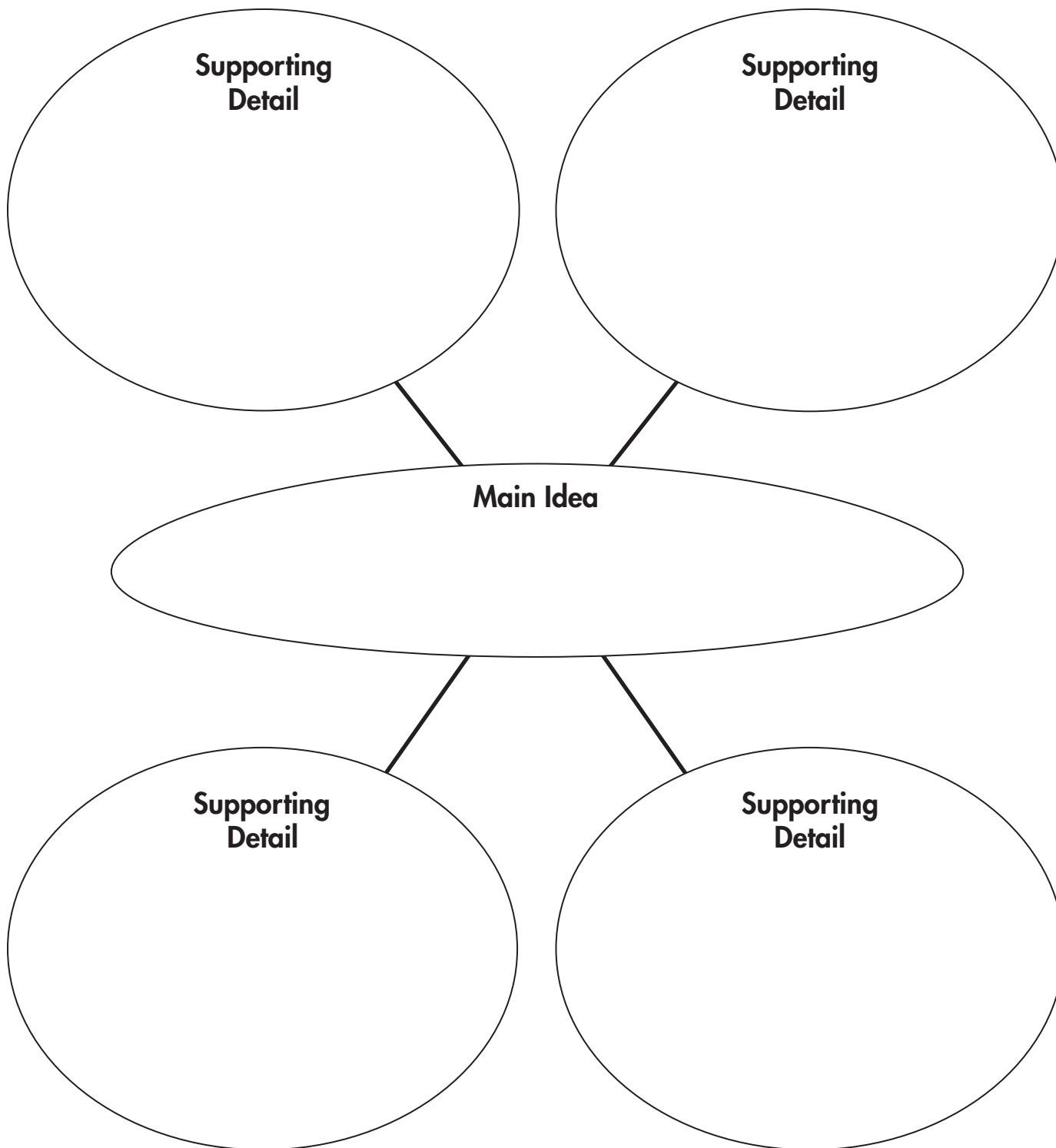
submarine (*n.*) a kind of watercraft that can operate completely underwater (p. 17)

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Titanic, 12
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Name _____

INSTRUCTIONS: Write the main idea for the section titled "Special Ships and Boats" in the center of the web. Record the supporting details in the surrounding circles.



Name _____

INSTRUCTIONS: Read the sentences below. Find the comparative or superlative adjective in each sentence and circle it. On the line, identify it by writing either *comparative* or *superlative*.

1. Ships and boats were once the fastest way to move things. _____
2. Frame boats were larger than log boats. _____
3. The oars were longer than paddles. _____
4. Motorboats are faster than sailboats. _____
5. Rowboats are some of the smallest boats. _____
6. As ships became bigger, they needed more sails. _____
7. People still use smaller boats for fishing, fun, and sport. _____
8. Ships and boats still share many features with the earliest design.

9. The largest galleys could have hundreds of rowers sitting on several decks.

10. The earliest sails were made from animal skins. _____
11. Sailboats could travel much farther distances than ships with rowers.

12. The two hulls allow catamarans to travel faster than most ships with one hull.

13. The largest oil tanker in the oil world is over 1,500 feet long. _____
14. Fifteen-hundred feet is longer than the Empire State Building is tall.

Name _____

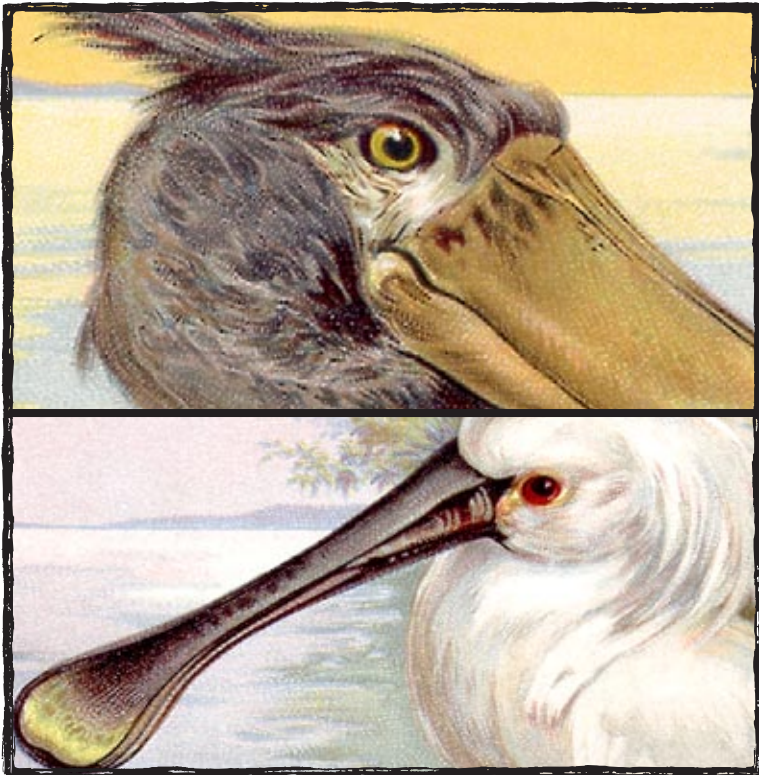
INSTRUCTIONS: Below are words taken from *Ships and Boats*. Cut along the dotted lines to separate the boxes. Then move the boxes around on a flat surface to arrange the words in alphabetical order.

paddles	course	ship
frames	catamaran	coasts
goods	propellers	motors
water	prows	sails
oars	submarine	boat

Weird Bird Beaks

A Reading A-Z Level R Leveled Reader

Word Count: 990



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Bearded Barbet

I am a bearded barbet, as you can see from the hairlike feathers that look like a beard on my beak. My large, thick beak also has pointed parts on the bottom like sharp teeth.

I live where it is dry in Africa, and I am a member of the woodpecker family. Like the woodpecker, I often use my tail feathers to help me hold onto trees.

I use my beak to make a hole in a dead tree or stump to build my nest. I feed on fruit and sometimes on insects.

I live with a partner and three or four other birds that help incubate our eggs and care for the chicks after they hatch.



Crossbill

I am a type of finch called a crossbill because my beak is crossed like an X, which helps me pull the seeds out of pinecones. I hold a cone with one foot and then pry open the scales of the cone to get the pine nuts.

Pinecones grow on trees called conifers, but conifers don't produce good pinecones every year, so I travel all over to find pinecones instead of living in one place. If I can't find any pine nuts to eat, I will settle for other seeds and even insects to survive.

Like the canary, which I'm related to, I sing beautiful and elaborate melodies.



Rhinoceros Hornbill

I am called a rhinoceros hornbill because of the horn on top of my beak, which I use to knock down fruit. I also use my horn to fight and sometimes to attract a mate.

When my mate is incubating eggs in a tree-hole nest, I seal her in with mud. I leave a small opening in the mud for my beak to fit through so that I can bring her food. She breaks out once our babies hatch, but then we seal them in again for safety until they are old enough to leave the nest.

If you think my horn looks weird, you should see my eyelashes! I am one of the few birds that have them.



Huia

We huias (HOO-yuhs) lived in New Zealand until we became **extinct**.

“I am the male. My beak is thick and strong.”

“I am the female. My beak is thin and curved.”

Our beaks were so different that for a long time, people thought we weren’t related to each other at all. We looked alike otherwise, though, with orange fleshy **wattles** and shiny black feathers except for the white tips of our tails. We ate insects and insect larvae, spiders, and sometimes berries.



Sword-Billed Hummingbird

I am a sword-billed hummingbird, a very small bird with a very long beak; in fact, I’m the only bird with a bill longer than my body.

My beak is heavy, so when I land I tilt my head up to reduce the strain on my neck.

I use my long beak and even longer tongue to get nectar from tube-shaped flowers.

I can stick my tongue out and pull it back in again about 13 times per second.

I live in the Andes Mountains of South America, where I build my nest of moss and leaves, held together with cobwebs.



Brown Pelican

I am a brown pelican, and I have a pouch of skin under my beak that can hold a lot of fish and water—almost three gallons! I hunt in the ocean, diving down into the water from the air, although I'm not above taking fish from fishing boats.

I sometimes steal fish from other birds, but they steal from me, too. Gulls even sit on my head and back while they take fish right out of my pouch!

I have webbed feet, which I use to warm my eggs, unlike most birds, which use their breasts.



Shoebill Stork

I am called a shoebill stork because my beak is shaped like a shoe but with a hook on the end that helps me eat fish. I hunt fish by waiting for one to swim by and then falling onto it with my mouth open. Sometimes I'll eat frogs and even small crocodiles.

I live in the swamps and marshes of Africa, where I have one mate for life. We don't really hang out with other shoebill storks unless food is **scarce**. We share the work of parenting, including keeping our eggs cool by **dousing** them with mouthfuls of water and surrounding them with wet grass. Even after our chicks are born, we keep cooling them off until they grow their own feathers.



Spoonbill

I am called a spoonbill because I have a long beak that flattens out at the end like a spoon. People often confuse me with a flamingo because of my white and pink color, but not after they see my bill, which looks nothing like a flamingo's.

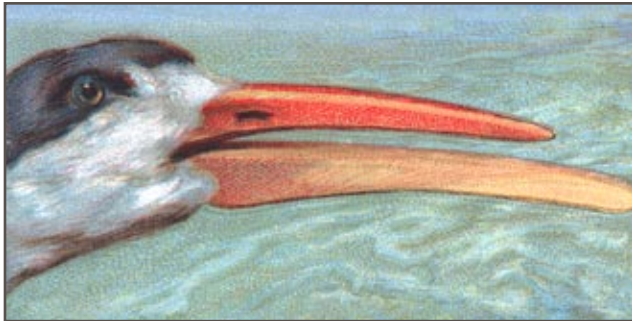
To find food, I sweep my bill back and forth in the mud and shallow water, using touch more than sight to hunt. When I feel something bump against my beak, I snatch it up. I like to eat frogs, **shellfish**, seaweed, and small fish, which I will **regurgitate** into my babies' mouths back at the nest.



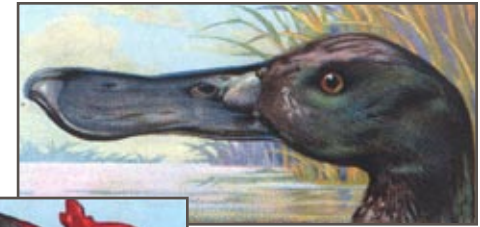
Toucan

I am a toucan, and I have a huge and colorful beak that is actually very light because it's full of air pockets. I eat fruit, seeds, insects, eggs, and sometimes lizards. My beak helps me reach fruit while I sit in rainforest trees and to toss it back and forth with another toucan as part of a mating **ritual**. I can also use my beak to skin the fruit.

I have two claws that point forward and two that point backward to help me hold onto branches, and my nest is in a tree hole. Baby toucans take several months to grow the large beak typical of adult toucans.



As you can see, many birds have weird beaks. Some beaks help birds to catch or eat their food. Other beaks just look incredible. Which beak is your favorite?



Glossary

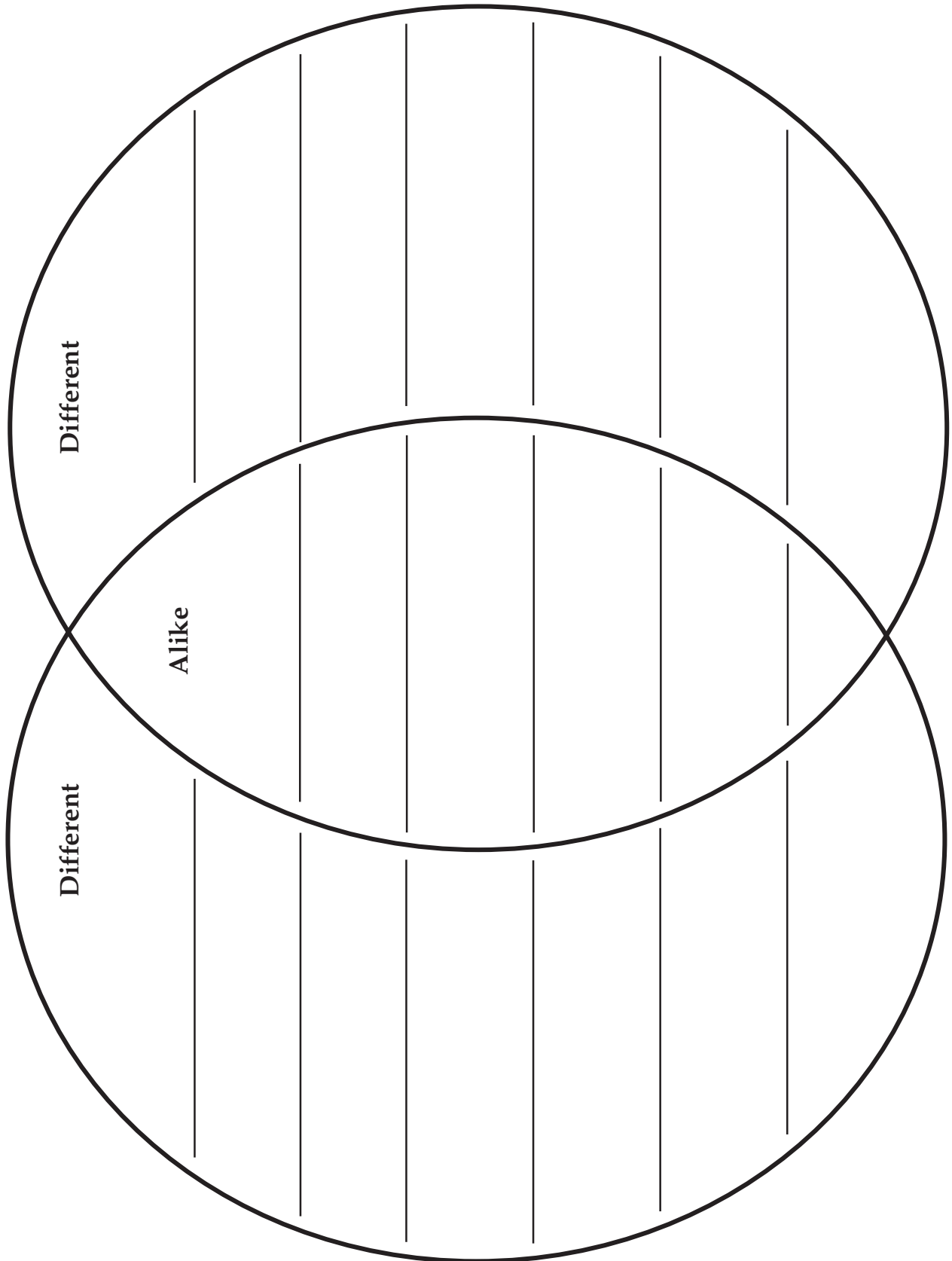
dousing (<i>v.</i>)	to throw a liquid on (p. 10)
extinct (<i>adj.</i>)	no longer living anywhere (p. 7)
regurgitate (<i>v.</i>)	to throw up partially-digested food (p. 11)
ritual (<i>n.</i>)	a repeated series of acts for a particular purpose (p. 12)
scarce (<i>adj.</i>)	hard to find; rare (p. 10)
shellfish (<i>n.</i>)	animals that have shells and live in the water (p. 11)
wattles (<i>n.</i>)	flaps of skin that hang from birds' necks (p. 7)

Name _____

Instructions: Compare and contrast the beaks of brown pelicans and spoonbills. Write the two topics you are comparing on the lines. Write the details that tell how the topics are different in the outer circles. Write details that tell how the topics are alike where the circles overlap.

Topic: _____

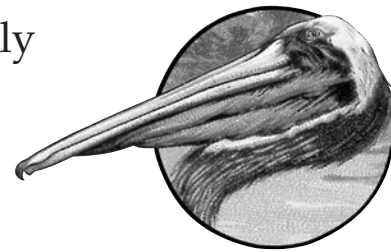
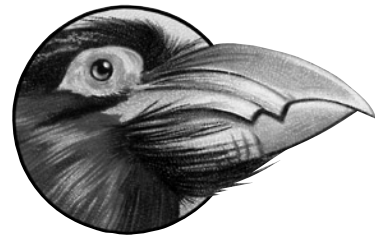
Topic: _____



Name _____

INSTRUCTIONS: Read the sentences below. Circle all of the adjectives and underline the nouns or pronouns that they describe.

1. My large, thick beak also has pointed parts on the bottom like sharp teeth.
2. I live with a partner and three or four other birds that help care for the chicks.
3. I sing beautiful and elaborate melodies.
4. My beak is thin and curved.
5. We have orange fleshy wattles and shiny black feathers with white tips on our tails.
6. I am a sword-billed hummingbird, a very small bird with a very long beak.
7. I use my long beak and even longer tongue to get nectar from tube-shaped flowers.
8. I am a brown pelican, and I have a pouch of skin under my beak that can hold a lot of fish and water—almost three gallons!
9. We keep our eggs cool by dousing them with mouthfuls of water and surrounding them with wet grass.
10. I have a huge and colorful beak that is actually very light because it's full of air pockets.

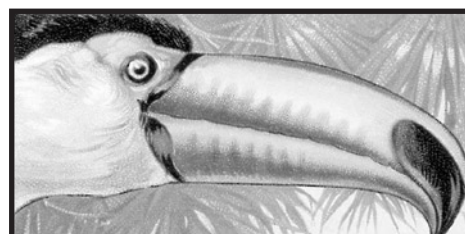


Name _____

Instructions: Choose an antonym for each word in the box. Put a check mark in the thesaurus box across from each word after you check your answers in a thesaurus.

heavy	tiny	release	bottom
few	useless	short	in

Word	Antonym	Thesaurus
out		
top		
long		
hold		
useful		
huge		
many		
light		



Robin Hood Wins the Sheriff's Golden Arrow

A Reading A-Z Level R Leveled Reader

Word Count: 1,183

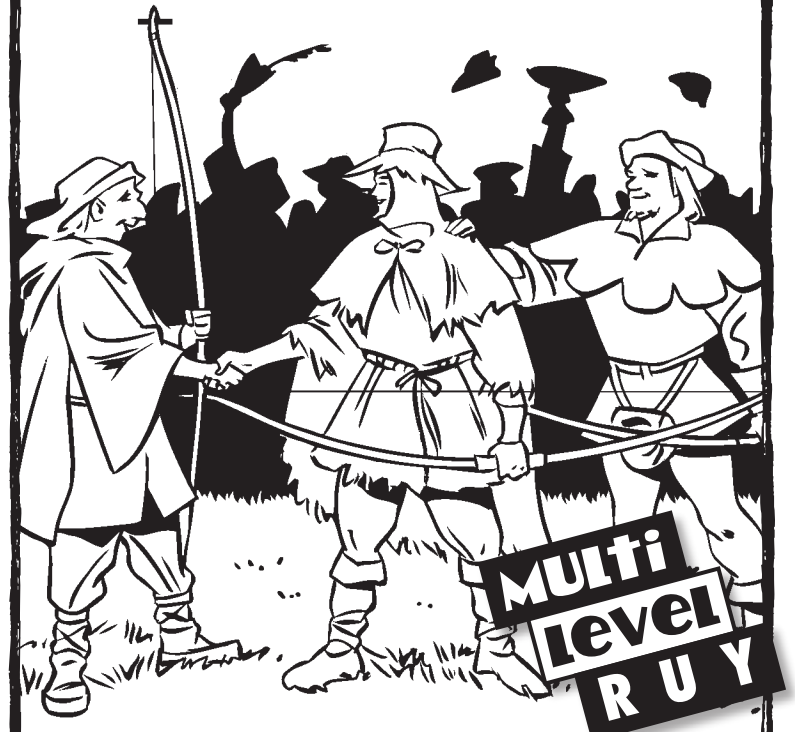


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Robin Hood Wins the Sheriff's Golden Arrow



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Illustrated by David Cockcroft

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This story is an English folktale adapted for Reading A-Z by
Karina Barrentine from an original retelling
by Bertha E. Bush published in 1912.



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Introduction

Robin Hood lived with his band of followers, the Merry Men, deep inside Sherwood Forest. They felt safe there, where they had built shelters of logs and bark. When it wasn't raining, they slept outside on deerskins outside under the stars. The men cooked their meals over a roaring fire, and ate sitting on the ground or on logs.



More than a hundred men made up Robin Hood's band of followers. They were all rough outlaws but had kind hearts. They were devoted to Robin Hood and his cause, and obeyed his every word. Robin needed only to play a note on his horn and the men would appear. They were the best **archers**, wrestlers, and swordsmen in all of England. They practiced daily to improve their skills. Robin Hood was the best of all the archers in the land.



Times were bad in England. **Cruel** (KROO-uhl) lords became rich by taxing the poor. Sometimes they took everything a family owned. As a child, Robin Hood had seen many of his friends' and neighbors' lives ruined. He **vowed** to make things right when he grew up.

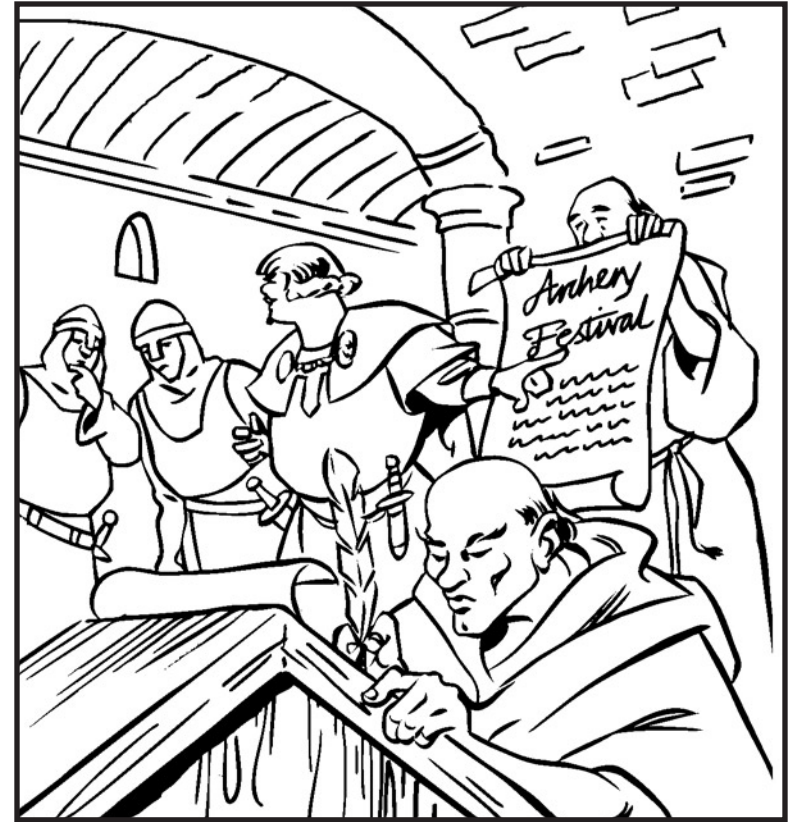
He became an outlaw by robbing and fighting the corrupt lords. Robin Hood and his men would steal back the gold taken in unjust taxes. Then they gave the gold back to the poor people. To his enemies, Robin and his men were hated robbers. To the common folk they helped, they were beloved heroes.



The Sheriff of Nottingham

The Sheriff of Nottingham hated Robin Hood. The Sheriff wanted nothing more than to catch Robin Hood and hang him in public.

Time after time, Robin got away from the Sheriff's traps. The Sheriff grew more angry and **spiteful**. One day he sent a stout guard with a **warrant** to arrest Robin Hood. Robin met the guard on the road. He invited the guard to a feast in the forest. The guard ate too much and fell asleep. While the guard slept, Robin stole the warrant out of his pocket. Without a warrant, the guard couldn't arrest Robin Hood. The guard returned to the Sheriff empty-handed.



The Sheriff of Nottingham knew it was no use sending more guards. "I've got it," said the Sheriff. "I'll catch him by trickery. I'll hold a great archery festival. The best archers in England will come here to compete. We'll give a prize of a gold-covered arrow. Robin Hood won't be able to resist the contest. When he comes, I'll arrest and hang him."

Robin Hood and his men prepared to go to the archery contest, but they disguised themselves. They dressed as barefoot **monks**, traders, farmers, and peasants. Robin was the hardest to recognize. He was dressed in the tattered clothes of a beggar.



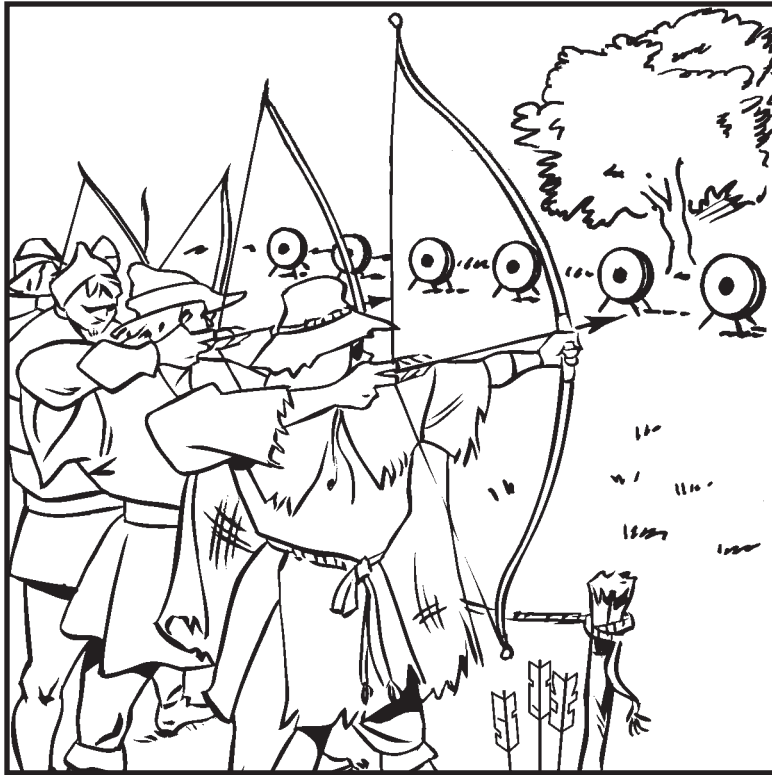
Still, his loyal men were worried and asked Robin not to go. "This archery contest is a trap of the Sheriff's. He and his guards will know you by your hair and eyes. Please, please don't go to the contest, Robin."

Robin Hood just laughed. "Why, I can color my yellow hair with walnut stain. I can cover one of my eyes with a patch so my face will look different. A bit of danger will make it all the more fun."



The Archery Festival

The field where the contest would be held was ready. It had rows of benches for the festive viewers to sit on. The crowd of people had worn their very best clothes. All the wealthy lords were dressed like **birds of paradise**. The Sheriff had on purple velvet. His lady wore blue velvet, and both were trimmed with pure white fur. They wore broad gold chains around their necks that displayed their great wealth.



The Sheriff looked all through the crowd for Robin Hood. He looked closely at everyone, but he didn't see the outlaw anywhere. In his beggar's clothes, Robin stood not ten feet from the Sheriff. The Sheriff did not recognize him.

Finally, it was time for the competition to begin. The archery targets had been set up so far away that it was difficult to see them clearly. Dozens of archers took turns shooting just one arrow. Only ten of them even hit the target.

The Sheriff glared at the ten remaining men. "I was so sure Robin Hood would be here," he said to a guard. "Couldn't one of these men be Robin Hood in disguise?"

"No, sir," said the man-at-arms. "Six of them I know well, and they are the best archers in England. There's Gill o' the Red Cap, Diccon Cruikshank, Adam o' the Dell, William o' Leslie, Hubert o' Cloud, and Swithin o' Hertford. Of the other four, three men are the wrong size. That leaves only the ragged beggar. His hair is too dark for him to be Robin Hood, and he is blind in one eye."



The guard was glad Robin hadn't come and been trapped. He didn't want to see Robin harmed. Robin Hood had lots of friends among the common people. Even the Sheriff's own guards had helped him get away many times.



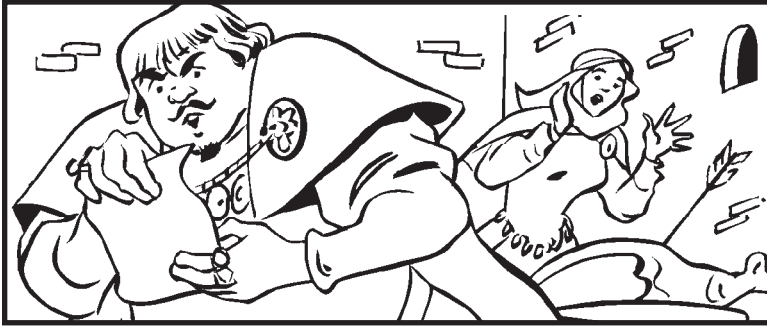
One by one, the archers aimed and let their **quills** fly. Each of the arrows struck near the center of the target. Gill o' the Red Cap's first arrow struck only an inch from the center. His second and third were even closer. Then Robin Hood, who looked to everyone like the poorest beggar in England, shot his arrow. It hit the very center and the crowd gasped. Adam o' the Dell was to shoot next, but he unstrung his bow instead. "I've been an archer for forty years," said the man, "and I will never do better than that shot."



And so the tattered beggar won the gold-covered arrow. The Sheriff's face was sour when he awarded the prize. "You are the best archer I have ever seen," he said. "You shoot even better than that coward Robin Hood. He dared not show his face today. I will pay you well if you join my service."

"I will not," said the ragged stranger, firmly.

Robin Hood left quickly, but the Sheriff's words bothered him. "I just can't bear to have him think I am a coward," he said to Little John, his right-hand man. "I will let the Sheriff know I am the person who won his fine gold-covered arrow."



The Message

The Sheriff was **glum** that night at supper. "I thought I could catch that thief with this contest," he said to his wife. "I guess Robin Hood was too much of a coward to show his face." Right then, a **shaft** flew through the window. It stuck straight into the roast on the table. Astounded, the Sheriff unfolded the note that was attached to the arrow. The note said that the beggar who won the contest had been Robin Hood. The arrow was the very same arrow the Sheriff had covered in gold and given as the prize!

The Sheriff was enraged. Robin Hood's men had scraped off the gold and kept it. The **duped** Sheriff upended the table and stormed off. Nearby, Robin Hood and his men had never been merrier.

Glossary

archers (<i>n.</i>)	people who are skilled at shooting with a bow and arrows (p. 5)
birds of paradise (<i>n.</i>)	birds found in warm climates that have feathers of many different colors (p. 10)
cruel (<i>adj.</i>)	mean; unkind (p. 6)
duped (<i>v.</i>)	tricked (p. 15)
glum (<i>adj.</i>)	sad; depressed (p. 15)
monks (<i>n.</i>)	religious people who usually wear long robes and live separately from the rest of the world (p. 9)
quills (<i>n.</i>)	feathers, especially pointed feathers used in arrows and sometimes as pens (p. 13)
shaft (<i>n.</i>)	the straight wooden part of an arrow (p. 15)
spiteful (<i>adj.</i>)	angry; jealous (p. 7)
vowed (<i>v.</i>)	promised (p. 6)
warrant (<i>n.</i>)	a written order authorizing an arrest or a search (p. 7)

Reading a-z

Book/Topic: _____

[illegible]

Name _____

Instructions: Read the pronouns in the word box. Then read each sentence. Replace the underlined word or words in each sentence with a pronoun from the word box. Write the new sentence on the line.

I	We	his	you	they
It	He	They	him	them

1. The cruel lords became rich by overtaxing the poor.

2. Each man in his band was devoted to Robin Hood and his cause.

3. Robin and his men would rob the lords of their bulging purses.

4. Robin Hood wasn't afraid of the Sheriff.

5. It was a rugged outdoor life that the Merry Men led.

6. Robin Hood will be careful.

7. "The other archers and I will never be able to shoot better than that."

8. "Robin, this contest is a trap meant to lure Robin to your death."

9. The arrow crashed through the window.

10. Robin and Robin's men had never been merrier.

Name _____

Instructions: Look through *Robin Hood Wins the Sheriff's Golden Arrow* to find twelve adjectives. Write them in the first column. Write a synonym for each adjective in the second column. At the bottom of the page, use two of the synonyms in two sentences. Use a thesaurus or dictionary if you need help.

Adjectives	Synonyms
1.	
2.	
3.	
4.	
5.	
6.	
7.	
8.	
9.	
10.	
11.	
12.	
My Sentences:	